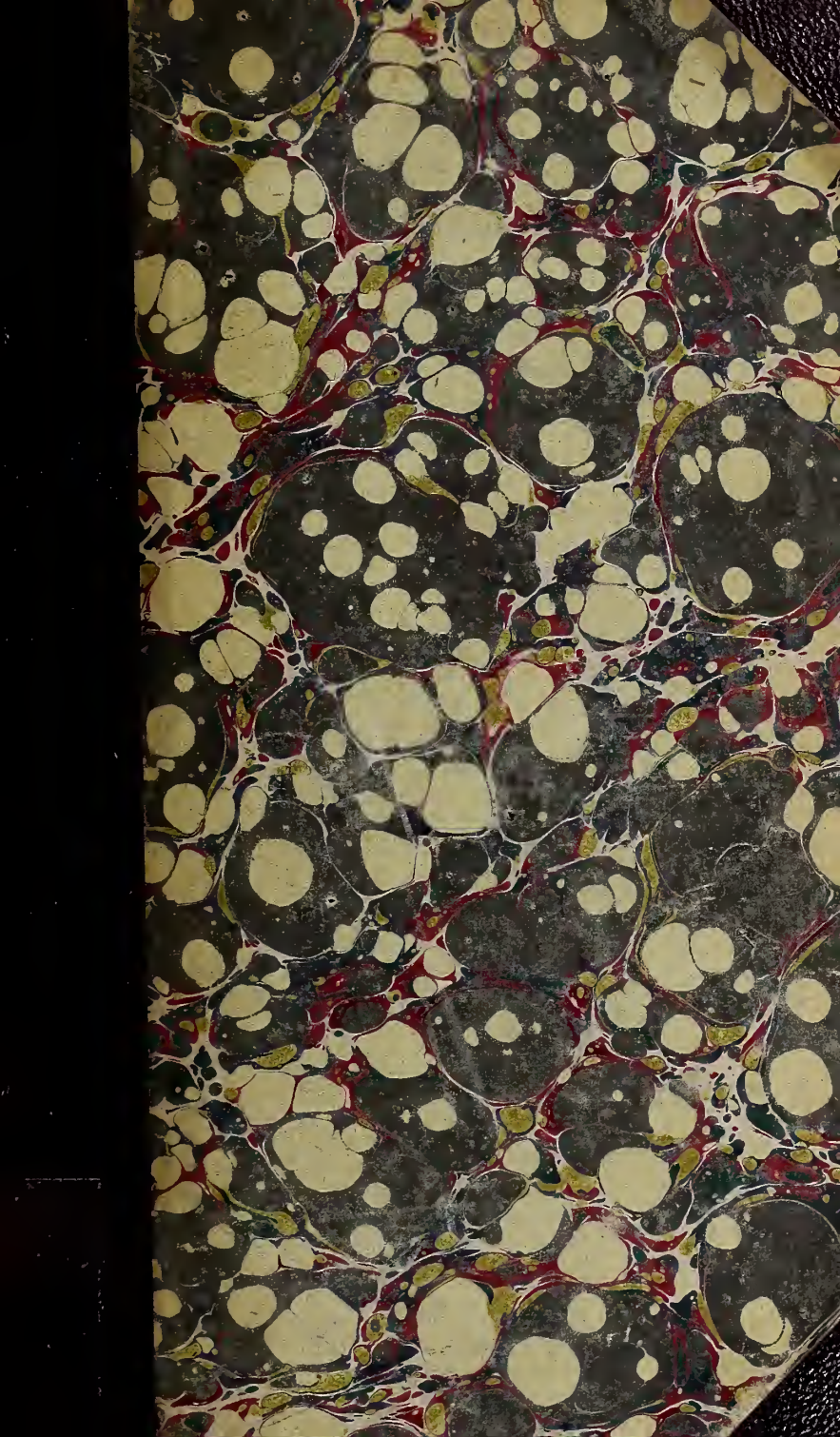

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Report on the Statistics of Banda.—*By* M. P. Edgeworth, *Esquire, Commissioner of Mooltan, late Collector of Banda.*

The district of Banda forms an irregular triangle bounded on the north and north-east by the river Jumna, which separates it from the Fattehpur and Allahabad districts; on the west principally by the river Ken (Caine), part of the Banda and Pyláni divisions, moreover, extend beyond that river and are bounded by the Hamirpur district, and the Cherkhari and Jaloun states; the south-west and south are bounded by the river Ken and partly by the second range of low hills, forming the flank of the table-land of Bundelkhand. But the intermediate boundary is very irregular, owing to the intermixture of villages belonging to Adjyegarh and Punna among the independent states, but principally arising from the exchange of many villages in Pergannáhs Kúnhas and Bhitri for the Pergannáh of Kálinjar taken from the Chaubehs; this leaves a long slip of independent territory between the Pergannáhs of Budousa and Tirohan. This irregularity of outline is increased by the circumstance that such villages in the above named Pergannáhs, as were then held rent free, were not given to the Chaubehs, but remained under the jurisdiction of the officers of this district.

3*rd*. The actual area amounts to 18,42,480 acres or 2,174-8 statute and geographical miles distributed as follows.—

Barren, 3,49,214 acres.
Culturable, 4,60,887 do.
Cultivated, 9,63,126 do.

4*th*. The whole of the district, with the exceptions below mentioned, forms part of the conquered provinces, having been obtained from the Peshwa in 1804, A. D., and brought under the Regulations by Regulation IV. of 1804. Pergannáh Kalinjar was taken from the Chaubehs in 1812, and an equivalent given from Pergannáhs Bhitri, Kunhas and Budausá (vide Regulation XXII. of 1812); Pergannáh Khundeh was added to the district by Regulation II. of 1818, being ceded by Náná Govind Ráo.

5*th*. The elevations of the trigonometrical stations in or adjoining the district above the sea as determined by the Grand Trigonometrical Survey are as follow.—

Kanakhera,	473.7	feet above sea level.	Kachar,	1519.6	feet above sea level.
Kartar,	1,179.8	do. do.	Lalapur,	825.9	do. do.
Peprendi,	494.9	do. do.	Pabhasa,	610.5	do. do.
Seonda,	908.6	do. do.			

6*th*. The geological structure of the district is very interesting, and merits a much fuller elucidation than I have the means of giving. There are two distinct characters of country, the plains and the table-land above the first range of hills or *Patha*. The plains are not of the extreme uniformity exhibited in the greater part of the Upper Provinces; they are not only similarly broken by deep ravines, running to the principal rivers, but diversified with isolated hills generally of granite but occasionally of syenite or quartz, either white or tinged of a deep reddish brown by ferruginous matter. The general appearance of the plains is strikingly similar to part of the Siberian steppe as described by Humboldt in his Asie Centrale:—and doubtless the origin of our granitic hills is similar. The granite is exceedingly liable to disintegration into large masses, so as to present to the eye a confused congeries of boulders of all sizes, sometimes in concentric segments of circles, and sometimes in straight parallel lines. The tendency of these masses is to split in fixed directions, not unfrequently so as to leave large surfaces exposed of almost perfect flatness; from this tendency it appears to me that the practice of splitting granite into blocks for building, by the simple agency of fire and water, as used in the south of Indía, might be advantageously tried here. The granite is much traversed by veins of quartz of every degree of thickness from a line to several yards, and

the nature of the stone is likewise very variable from the finest grain of very great hardness, to a coarse grain so loosely held together by the felspar as to appear rotten and to be quite friable.

7th. The greenstone and syenite are of great variety.

I annex a translation from Jacquemont's travels, regarding the geological features of this part of the country, as shewn in the hill of Kálinjar. I give it as the work is rare *and not translated.* Extract from Jacquemont's travels, Volume 1, Page 427.

Between Nyagawn where M. Jacquemont entered the district and Kálinjar—

"There is nothing to note but some hillocks of hornblende rocks. The slaty structure is entirely unknown,—all are granitic; the suppression of quartz turns it into greenstone which decomposes into concentric balls; its predominance on the other hand gives a straight laminary structure to the rock probably due to the felspar, which is intimately mixed with the quartz, when the latter is very abundant. It is the same as at Adjíghar.

"At length we pass the river Baugi formed by the junction of several streams from the high land, and we enter the great village situated between its right bank and the foot of the hill of Kálinjar.

* * * * * * * * *

"Geological description of the hill of Kálinjar.

"Up to the foot of the escarpement the mountain is formed of syenite rocks which in their varieties and bearing, resemble the appearances (of those) at Adjíghar. The syenite, consisting of rose-coloured felspar, whitish quartz, and black hornblende (in the form of large crystals), is found principally in large unconnected blocks on every stage of the hill; also varieties of the same rock with smaller crystals; others where their flakes (laminæ) of mica are intermixed with the hornblende, without entirely suppressing it. Rocks of felspar and of actinolite or of felspar and of diallage, doubtful with reference to the nature of their component parts here as well as at Adjíghar, and lastly those greenstones which become decomposed into concentric balls; these are the principal kinds. It is equally difficult to say which predominates over the other —which forms the mass of the mountain intersected by the veins of others; but all the passages of one species, or even from one simple variety to another, are cut off; in the extent of the same mass, one

hardly perceives from one extremity to another the smallest modification arise, be it in the proportion of the mineralogical elements or in the size of the crystals. One would say, that the whole mountain is formed of a great number of immense polyhedric masses morticed one to another, some species more, others less frequently, recurring.

"I have not seen Basanite (Brongniart, Classification of Rocks) in the place nor spread on the declivity of the mountain, but several mutilated idols are sculptured of this rock, and I have good reason to believe that they did not go far to seek it." (This is the greenstone teliya alluded to by me in para. 9.) "The thickness of the sandstones which cover up this system, seems to me the same as, or slightly greater than at Adjíghar. These sandstones are identical in their composition, in their appearance, and the peculiarities of their bearing with those of Adjíghar. They form like them immense compact masses, which divide, only according to lines almost straight or horizontal, into so small steatite or clayey beds that they are easily missed in the sections of the ground. With these compact shelves are intercalated beds with a cleavage parallel or oblique to their lie. These differences in the mode of the interior division of each bed are isolated from all the others. Towards the middle part and the summit, the predominating variety has a very fine grain (exclusively?) quartz. Its colour is of a greenish grey, its hardness extreme. One may call it granular quartz. Lower, with the same structure and the same hardness it becomes reddish and very sensibly micaceous. It is sprinkled with tolerably large reddish spots of a deeper colour, which lose themselves in the interior of the rock, and seem formed by slight accumulations of red clay, and spotted with little round stains, brown or ocherous, produced by cavities sometimes lined, more commonly filled, with concretions of oxide of iron. Open and exposed to the air, these cavities soon empty themselves of the substance they contain, and thus give to all the old surface the appearance of being pierced with holes. The first variety of a dirty greenish yellow destitute of mica reappears above this, and covers again a bank of a hardness, of an equal fineness, and of a brown colour, in which are dispersed some grains of a shining glassy quartz, and round fragments of ochery clay. (Perhaps the round cavities are filled with this substance?) In this sandstone there extends in lines slightly marked a conglomerate,—in which are embedded, in a ferruginous and micaceous or flinty cement,

fragments (evidently) of compact clay and white quartz, which seem to become blended with the flinty and crystalline cover which envelopes them. A greenish clay, in small and curved heaps, lines the largest heterogeneous parts of this breccia, and its flinty and crystalline matrix is full of cavities, as in the sandstone, filled, or oftener lined, with an ochery substance. This conglomerate resembles much certain varieties of the diamond-bearing conglomerate of Punna. It forms a sinuous unequal bed, of which the thickness does not vary less than $\frac{3}{4}$ to $1\frac{1}{2}$ foot in the slight extent which I could examine. It is immediately covered with small layers of sandstone which are separated by clay. Underneath, I have only seen the sandstone described in the last place with fragments of baked clay and shining grains of glassy quartz; but their actual observation was impossible, and I could only make conjectures on what I should have found, descending to meet the syenitic rocks. In a deep excavation open towards the mean height of the escarpement, and which descends within its walls even below its base, I observed the beds the lower part of which I will now describe. A circumstance worthy of remark: this excavation leads to a subterranean well, of which the depth, they say, is unknown (Pátál Gangá). The bed of the conglomerate there reaches the level of the water; the sandstone with grains of shining glassy quartz is submerged. These grains of shining glassy quartz are exactly the same as those found at Adjíghar, in the porphyry and sandstone which border on it. Here I have not seen porphyry well defined; but is it not represented by the conglomerate? It is in the porphyry at Adjíghar as here in the conglomerate that a similar cavern full of water opens; perhaps, elsewhere the porphyry exists under the conglomerate; a rock half decomposed, of a doubtful structure, which is found at some distance from thence, underneath the syenite, completes the resemblance of the two localities. It is formed of a green and red matter (perhaps of clay or of Actinyte and feldspar decomposed), in which are embedded some crystals of red feldspar and fragments of white quartz. The red matter forms here and there little leaf-like masses. Is it a crystalized rock in a state of decomposition? Is it a sandy rock? I cannot say; but it is the same rock which I have seen at Adjíghar, enter into the syenites and the porphyres. It constitutes here in like manner a thick mass, moulded on in relief on the syenite, which divides itself

obscurely in great pseudo-regular rhomboids. The summit of the mountain is covered with the same red gravel (oxide of iron), which is found at Adjíghar, on a multitude of places on the Plateau of Rewah, and which is washed at Punna as a diamond mine. Kunkur is entirely wanting, the gravel has been often washed by the people of the garrison, and diamonds have never been found, but as they are occasionally found on the neighbouring mountains on the confines of the Plateau, the seekers are not discouraged; they are also found in the plains at the foot of these mountains."

8*th*. All the more scattered and outlying hills are of granite (rarely of quartz), as we advance southward more or less of the greenstone syenite appear, and finally we find the hills capped with a perpendicular escarpe of sandstone of more or less depth. The lower strata of the sandstone appear to me to be more or less altered by heat, where meeting the granite, the metamorphic strata being sometimes only a few inches, as at Kálinjar; but in other places a thick mass of metamorphic rock is interposed, consisting either of very hard silicious masses, (sometimes of very great beauty when polished) or of a very hard stone termed by the natives Kurbia (hornstone); this forms the base of all the outer hills from the Pysuni to the Ohun. It is noticeable from its tendency to break into irregular, somewhat cubical masses, seamed on the upper surface with deep scars. This tendency often gives the base of a hill, the appearance of having been cut into giant stairs. The stone is used only for building and in the rough, as it is too hard to be dressed. In this rock are the very remarkable caves called the Gupta Godávari, near Chobepur, in Pergannáh Bhitri; and although not at present included in the district, being in the lands given to the Kálinjar Chaubehs, I may be permitted to notice so very remarkable a curiosity, as being within the former limits of the district. Where they occur the hornstone must be upwards of 150 feet thick: there are two caves one below the other. In the lower one, progress is soon stopped by the depth of the water, which is by the superstitious Hindus believed to come direct from the Godávari; the upper cave consists of 3 irregular chambers: the walls are perfectly dry, uo stalactites or any of the usual appearances of caves. The principal hall is of very considerable height, and the summit of the dome-shaped roof appears to have broken in, and the fissure to be filled by a mass, which

appeared to be sandstone. In the inner cave is a stream of water, the temperature of which was 84°, (that of the free air being 55°,) which may be considered as the mean temperature.

9th. The great mass of the hills forming the barrier of the tableland consists of sandstone. This lies in layers of very different degrees of thickness and hardness; some being quite friable, others admirably adapted for building, millstones, and many other useful purposes. Most of the highly ornamented temples in the district are built of this stone, which has preserved a wonderful degree of sharpness in the carvings, after centuries of exposure to the weather. The principal quarries are as follows:—Rawli, Gondá, Sidhpur, Mudyan Panwári, Bhownri, Kolgudhyá, Buryári, Kulan, Pardawan and Benipur Páli. But small quarries are opened at many other places for local purposes, especially millstone making. A quarry of greenstone termed teliya, is situated at Purwa in Pergannáh Kunhas, (now transferred to the Chaubehs in lieu of Kálinjar); it admits of a very high polish and is much used in making idols, &c., although a similar stone is found in some of our own villages, it is not quarried elsewhere. A green coloured sandstone is found near Rusin, which is used for colouring walls; the stone is ground, mixed with gum water and grease, and smeared upon the walls; it gives a dark bluish green colour. It is found, but in smaller deposits, near Tirohan, especially at the summit of the remarkable hill of Sudhwárá and below the surface, in the bed of a nullah at Bramh Kund near Kámtá. It appears to be crude greenstone, not hardened by igneous action into the usual form of that rock.

10th. A stalagmitic deposit of limestone overlying sandstone occurs near Gurhrámpur, which is extensively quarried and burnt at the village of Gurhrámpur, whence it is extensively exported; it is valued from its great whiteness and purity. This deposit occurs abundantly elsewhere, and I have found it in every one of the similar dells I have examined in the Kalyángarh Pergannáh; but it is not used there as that Pergannáh is not so accessible as Gurhrámpur.

11th. The appearance of the sandstone crowned hills running along with a horizontal crest scarped summit and steep glacis with occasional heights and promontories, cannot fail to remind the spectator of a sea-coast view, while the solitary hills below have every appearance of islands standing in the now dried sea at their base.

12*th*. Ascending to the table-land or Patha, we find a very shallow soil resting on sandstone often cropping out in rugged rocks the harder portions standing up in relief, when the softer have been worn away. The unequal hardness of the layers composing the mass of sandstone, has given rise to some very curious and beautiful chasms formed by the streams. That near Gurhrámpur, where the limestone abovementioned is found, is not a mile outside the boundary, and of very remarkable appearance, the rocks above actually overhanging the base of the chasm, which must be upwards of 200 feet deep, and which after heavy rain must be a very fine waterfall. Similar, but larger falls are found on the Baghin, in the independent states 16 to 20 miles south of this district. Similar falls occur at Bedhak above Nihee, and Abarkan and Dharkhund above Kalyánpur, Pergannáh Kalyángarh, of smaller extent than the Gurhrámpur ones but of singular beauty. The falls of the Burdaha are broad but not very deep, there is a long cave or covered gallery running under the fall; it is situated on the confines of Mauzás Auchadi and Mow, Pergannáh Kalyángarh. Those of the Pysuni are double and the rock does not overhang: as in the other instance, they lie a few yards from the high road, near Mauza Bombhuá, Pergannáh Kalyángarh.

13*th*. In Pergannáh Kalyángarh iron is found and is worked pretty extensively at several points especially at Gobarhái; it is considered of very fine quality. The mines are situated high up in the hills. The works at Gobarhái are managed by a company of Lohars (blacksmiths); they pay nothing to the Zemindars for the right of digging the raw ore, but a sum of Rs. 4 per kiln per season. Work commences as soon after the close of the rains as they can get a sufficient quantity of charcoal ready, but it is not in full vigour till March. The manner of smelting is as follows. The ore, termed *Dháú* is broken into small pieces, and put into the first furnace, termed *Nár*, which is merely a sort of oven sunk below the surface, mixed with common charcoal, made indiscriminately from any wood; it is kept in a high state of ignition with a rude pair of bellows (Jór). A buffaloe load of charcoal is expended in one day upon about 1 or $1\frac{1}{4}$ mun of the Dháu, and after the whole day's work the first process is considered complete. The large mass of iron termed Chuli is then drawn out with a long pair of tongs termed Kargúhá or Sansi; it is cut in two while hot

with a great axe (Kulhári). These pigs are subsequently put into the refining furnace or Murai, which is more artificially built with a long chimney slanting upward, and with but one opening below. The furnace is filled up with charcoal, and in this stage that prepared from the Bambu is exclusively used, the orifice is nearly closed below and after the charcoal has all burned out the purified iron is removed, and in this state, termed Ogári, is sold. The slag left after the first process is not very heavy, and is porous; but that after the second operation is very dense and heavy: both are indifferently termed *Khit*. Five coolies are employed at each furnace (*Nár*), one at the bellows, and four at putting on fuel, and they each receive 2 annas a day. The digging of the ore and the greater part of the labour is performed by Koles, who receive wages of a rupee for 8 days, the more skilled part of the work is performed by the Lohárs themselves. The mines are situated at the top of the hill near the village of Gobarháï, about $1\frac{1}{2}$ mile from the smelting works, and 300 feet above them. The mass of the hill consists of sandstone, but the top is ferruginous; deep shafts are sunk and extensive passages are burrowed through the hill, as the ore lies at a distance of many feet from the surface. The mines were not at work when I visited them in January, consequently I was not able to enter them. The mines at Deori are, I am informed, worked in a similar manner. Those at Khiráni, in zillah Ú́cheyrá, adjoining this district, are managed by the Zemindars who pay the Lohárs only 1 R. per 10 days.

14*th*. Pipe clay is found in a pretty extensive deposit on the hill above Kolagudyá, Pergannáh Tirohan. It is found below the hornstone stratum mentioned in para. 8. Deep shafts sunk into the side of the hill through that rock, meet with a mass of hard white flint, and a soft greenish stone mixed with a profusion of agates in every stage of crystallization; and the pipe clay seems to be the softened state of these last stones. It was at one time used by Dr. Jeffries in his factory at Fattehgarh for pottery.

15*th*. The soils of the low ground consist of several varieties, but the principal ones are the *Mar* and *Kabur*, two varieties of the black soil termed Regur in the Peninsula. Specimens of these soils were sent for analysis to Mr. Middleton, at the Agra College, but want of means has prevented his being able to favour me with result to show

how far they differ from the Peninsular black soil. The main difference in description is that this soil here is not so easily pulverized as is there described. It is very retentive of moisture which is the main cause of its exceeding fertility; the gradual drying of the ground produces cracks and fissures, which continue deepening during the continuance of the dry weather; I have found however the soil quite moist at 4 feet below the surface in the month of June, after seven months unbroken drought.

16*th*. The following are the local native names of the different varieties of soils,—*Mar* or *Marwá*, is the blackest, of a very close grain and exceeding hardness, and when dry of a shining conchoidal fracture; this is generally situated in extensive patches rather lower in level than the rest of the country, and consequently crops in it are liable to injury from overrain. I am inclined to attribute the deepness of its color and richness to the admixture of decomposed vegetable matter.

17*th*. *Kabur* is in many respects similar to the *Mar*, it is of a lighter color, is more mixed with sandy particles, is not quite so productive as the former in its best seasons, but more uniformly to be depended upon.

18*th*. *Gond* (or *Khera*) is the name given to the land immediately adjoining villages, these are generally highly manured and occasionally even irrigated and cultivated with tobacco or vegetables.

19*th*. *Dandi* is more gravelly than *Segon* and less so than *Kankur*, generally on highest ground whence its name, and most cultivated in the rainy season.

20*th*. *Purwa* is similar in all essential parts, but less fertile, of a reddish color, and as far as I can ascertain, the best of the three for cotton; it is also termed *Segon*.

21*st*. *Kankur* is very extensive in the southern parts of the district, and is the worst soil, containing a great deal of sand.

22*nd*. *Barwá* is a sandy loam, but of very partial distribution. *Tari* and *Kachar* are sandy loams of very rich quality lying low by the side of streams, the former is sometimes, the latter annually, submerged by floods in the rains. These floods often leave an exceedingly rich deposit termed *Now lewa*, which gives the finest crops of wheat; but the extent of this soil varies every year and often alternates with barren sand. When the water subsides in the Jumna, and as soon as

the alluvium becomes solid enough to bear the weight of a plough, experimental furrows are made to ascertain if the deposit be deep enough to be available for cultivation ; it is so considered, if it be a foot deep. When thoroughly dried the Now lewa separates into cakes of great tenacity, like tiles or bricks according to its depth ; in places where the alluvium does not bear the weight of a man in November,—not only on the Jumna but along the Ken, Baghin and Pysunee,—cultivators, especially the Khewuts (or boatmen), sow a crop of barley or wheat, scattering the seed as far as they can, above the surface of the quicksand ; by the time the corn is ripe, the deposit assumes a sufficient degree of solidity to allow of the reapers going on it.

23*rd.* *Usar* is a peculiar soil very dark in color, found only in low situations ;—it will not produce any crop but rice, and that only in seasons of extraordinary wet.

24*th.* The soils peculiar to the Patha are *Setwuri*,—a greenish sandy loam, and *Gorowte*, a light soil easily pulverized (I suspect highly aluminous).

25*th.* The general aspect of the country is extremely rich, the low country being generally well cultivated and well wooded, not only with groves of mangoes and mowhas, but with noble trees of the latter species standing in the fields ; hedges or enclosures are rare, except such fences of dry thorns in the neighbourhood of jungles and just round the village itself. Where deer are very numerous I have observed a fence made of a single string with bits of straw or feathers tied in it struck on poles. Some parts have been denuded of trees either during the troubles preceding our acquiring possession of the country, as in the immediate neighbourhood of Banda, or subsequently owing to the demand for timber and the impolitic over-exaction of revenue, to meet which timber was felled to a lamentable extent. In the southern and eastern portion of the district, the scenery in the low land is of great beauty, consisting of rich cultivated plains dotted with noble trees, and broken by rugged hills, and occasionally by large tanks or clear streams. The top of the table-land, diversified with hills, forest and rocky streams, is less rich but by no means devoid of beauty.

Climate, 26*th.*—The climate of the low land of Banda differs in some important respects from that of the Doab. The cold is less intense in the cold season, frost being rare except in the moist land

adjoining the rivers. The injury done to crops and attributed to frost by the natives, I am inclined to lay to the account of electric phænomena, because it always occurs in irregular patches in the field, without any patent cause or reason from lowness of situation, dampness or exposure as would be the case were frost the cause. It likewise occurs when frost is impossible from the general temperature of the air. The hot weather commences in the middle of March and the spring crops, wheat, &c. are consequently ready for the sickle early in that month and very little is left uncut by the beginning of April. The hot winds are distinguished by two peculiarities; first, the absence or extreme rareness of dust storms; secondly, the exceeding purity and transparency of the atmosphere during greater part of that season especially in the afternoons, when in other parts of India, the sky has a hazy appearance from quantities of dust and fog in the air. I attribute this peculiarity to the constant exhalation of moisture proceeding from the ever-deepening fissures of the black soil. To this purity of atmosphere may perhaps be attributed the frequently fatal effects of the hot winds, or rather in my opinion, of the sun; deaths being not unfrequent among the natives from exposure at mid-day. In the commencement of the hot weather when the nights are still cold and the sun is powerful from the moment of its appearance, the optical phænomenon of the elevation of distant scenery is not uncommon, either so as to elongate the groves and trees naturally visible or so as to bring objects far beyond the natural field of view into sight. I have not been able to keep a very regular register of the thermometer owing to my absence in the interior of the district. The following is an abstract.

	1847-48. Means.				Extremes		1848-49. Means.				Extremes	
	Minimum.	Therm. at 9 A. M.	Maximum.	Mean.	Depression of wet bulb at 9 A. M.	Min.	Max.	Minimum.	Therm. at 9 A. M.	Maximum	Mean.	Depression of wet bulb.	Min.	Max.
May, ...	88.9	97.5	105.5	97.2	16	83	112	83	97.8	109	96.0	18	78	114
June, ...	88	97.1	108.1	98	12.5	78	112	84.8	95.8	104 6	94.7	12.2	79	110
July, ...	78.6	89.3	95	86.8	4.9	70	105	83.2	89	98	90.6	7	76	108
August, ..	78.4	85	90 2	84.2	2.9	74	100	79	86.6	93	86.2	4	76	99
September,	77.2	87	92.6	84.9	4.1	74	99	76.7	86.1	92.3	84.5	6.3	73	100
October,..	69.5	79.9	86.6	78	5.3	64	91	72.8	83	93.2	83	9.1	67	98
November,	59.5	67	75.5	67.5	3	56	78	57.7	71	82.6	75	0.6	49	87
December,	53 4	62	73.5	63.4	4	49	78	48.2	64.6	79	63.6	..	41	85
January,..	52.7	62	74	63.4	4	47	79	45.4	57	73.2	59.3	..	35	82
February,	52.2	59	71.6	61.9	5	45	80	52.8	64	83	77.9	..	44	96
March, ..	69.1	82.8	96	82.5	12.5	61	104	69						
April, ...	82.2	96	105.3	94	16.5	75	110							

The observations at 9 A. M. were not made every day. The very remarkable difference in the means of the two years is very striking, and renders it desirable to have observations extending through a much longer period. The instruments used were self-registering thermometers by Newman, the same which I employed in observations made at Amballa and published in J. A. S. 1839. They were hung in a northern Veranda about 7 feet above the ground. The temperature, as deduced by me, is very different from that given by Mr. Sutherland, because his register was kept inside the Jail Hospital, and therefore shews much less variation of temperature. The annual mean of my observations from May 1847 to June 1848 is 88° 4′, and from March 1848 to February 1849 is 88° 8′, which is considerably higher than the mean of Fattehgarh.

27*th.* As soon as the fall of the first rain in June softens the ground, then as hard as stone and full of deep fissures, the ploughs are brought out and all the land ploughed that is possible, that lying lowest is generally reserved for rabbi sowing, but not unfrequently if the rains begin badly, it is sown with kharif which succeeds or not according to the amount of rain; if it be, as is most general, destroyed by wet, it is ploughed in and rabbi sown in its place in November, but when the rains fail and the crops are very bad generally, these low grounds which are the most retentive of moisture yield fine crops, as was the case in 1848. The rabbi ploughing and sowing commences in October and continues till December, if the ground remains moist, but when no rain falls late in October or in November the ground becomes so hard as to render ploughing impossible, and seed if sown will not germinate as was the case to a lamentable extent in 1848. No regular rotation of crops is followed, but the almost universal mixture of crops answers the same purpose agriculturally.

28*th.* In the Patha, only the lands adjoining villages, or similarly favoured spots are capable of continued cultivation; other lands are seldom cropped for more than 3 years consecutively, and then left fallow for an indefinite time.

29*th.* The plough used in this district is the simplest, the common Indian plough. The large Búndelá plough or Bákhar is not generally used in it, except in the western part of Pergannáh Khundeh. The ground is very seldom harrowed or rolled, the earth being left in clods.

The carts used for bringing home crops from distant fields are termed Sudaha and are of the very rudest description, but very light and able to go over very rough ground without injury.

Production. 30*th.*—I divide the productions of the district under the heads of the two seasons—1st, the kharif or autumn crops which are sown in June and August; 2nd, the rabbi or spring harvest the sowing for which takes place in November and December.

31*st.* The main kharif crop in value is cotton. This is sown as soon as the rains commence in June or July, if the rains are late, a less breadth is sown, as a fine crop cannot be expected. It is generally mixed with some other plant, such as the Hibiscus cannabinus, Joar, Indian corn very thinly scattered and cut down before the cotton has attained its full growth, or Arhar (Cajauus bicolor), which succeeds the cotton in the end of the cold weather. The cotton begins to ripen in October, and is collected till January when the plant withers away.

32*nd.* Joar (Sorghun) is the most extensive crop as well as the cotton, it is very carefully weeded in the earlier part of the season, and a plough is lightly run through it to loosen the soil about the roots, the plant grows to a great height,—whole fields from 12 to 15 feet high,—the stalks are good fodder for cattle; they are chopped small and sold in the Bazar under the name of Kutya. The heads are cut off and brought to the thrashing floor when ripe, which is seldom till the end of November or beginning of December.

33*rd.* Bajra (Pennicillaria spicata) is likewise very extensively cultivated in all repects similarly to Joar. They are not ripe till the latter end of October or November, nor are the stalks all cut till February. In Pergannáh Chibu, the stalks are used for thatching, a purpose to which I have not seen it applied elsewhere.

34*th.* Sun (Crotolaria juncea: country hemp) is a frequent crop. The practice of leaving it to wither and ripen its seeds before cutting is a universal system and most injurious to the strength of the fibre produced. It is cut in January, and soaked in the rivers and ponds for some days, the outer bark is then taken off and the inner fibres pulled off by hand, the residue termed Silowa is used for basket makiug, and coarse mats to protect mud walls from the rain, &c. &c.

35*th.* Sun (Hibiscus cannabinus) is grown along the edges of fields, and mixed with cotton or Arhar, and is treated in a similar manner to the Crotolaria.

36*th.* Múng, Mash or Urd is cultivated pretty extensively, but generally mixed with Bájrá or Joar or Til. I do not recollect to have seen a field of it by itself; it ripens in October.

37*th.* Moth (Phaseolus aconitifolius) is similarly cultivated but not so ofteu.

38*th.* Arhar (Cajanus bicolor) is very extensively sown both by itself or mixed with cotton in June, July, and the produce is sometimes, (as this year) very great; it is reaped along with the wheat in March, it grows to the height of 10 and 11 feet sometimes. The twigs termed Kháru are of great use in basket making.

39*th.* The smaller millets, Chini (Panicum meliacium) and Kangni, here termed Kákún (Setaria Italica), are sown with the first fall of rain and are generally ripe and cut in the course of August, or early in September. A variety of the Panicum meliacium termed Kútki is peculiar to the Patha.

40*th.* Til (Sesamum orientale) is extensively cultivated both by itself or mixed with cotton or Urd. There are mills in most villages for expressing the oil; it is reaped in October.

41*st.* Sugar-cane is not now cultivated as a crop for sugar except in a few villages in Pergannáh Kálinjar, but only as a luxury in gardens; formerly it was more cultivated and numerous stone Kolus are to be seen lying about villages; but I am informed that these were really never used but distributed by a benevolent Mahomedan Governor in the time of Aurangzeb, for the purpose of encouraging the cultivation of the Cane; the general objections to it are the want of water for irrigation and the extreme abundance of white ants. It would, I think, be well worth while to attempt the introduction of some of those varieties which are stated to resist the attacks of those insects.

42*nd.* Rice is cultivated but partially, and only in such parts of the Mar land, as are lowest and almost continually under water. I have little doubt but that this crop might be very advantageously extended were there any means of securing a supply of water. A small quantity is sown in the rabbi along the edges of the rivers by the Khewats and reaped in March; a mode of cultivating it new to me.

43*rd.* Kodon (Paspalum scorbiculatum) is cultivated extensively. It is especially near the hills in Pergannáhs Budausá, Tirohau and Chibu.

44*th.* Mandua called here Murai (Eluesine corocana) is cultivated near and in the hills.

45*th.* I have not observed either the Sawank (Panicum frumentaceum), or Kutti (Dolichos uniflorus), cultivated in this district. But the wild Sawank (Panicum colonum) entirely covers the fallow Mar ground (reserved for wheat when there has been enough rain; in dry seasons as 1848, there is none), and in September or October crowds of the poorer classes may be seen sweeping the surface of the grass with a sort of basket to collect the small grain which easily falls out. In tanks where wild rice grows the grain is collected in a similar manner.

Rabbi crops. 46*th.* The principal crops are wheat, gram (Cicer arietinum), and channa or *Rubela,* which are sown both alone and mixed from the middle of October to December, according to the termination of rains. They are always sown in drill. The crops are very fine in the Mar aud Kabur lands but liable to iujury from heavy rains flooding them in the early part of the season and still more from rust, the almost certain consequence of rain in February.

47*th.* Barley is also considerably sown, generally mixed with gram especially in the Southern Pergannáhs.

48*th.* Masúr, *Ervum lens,* is also rare and principally in the above named Pergannáhs.

49*th.* The oil seeds Sarsún, Rái, are very partially cultivated, mostly in the Kachar land, and sown in lines among wheat. Lahi (Eruca sativa) is similarly cultivated especially in the Pergannáhs near the hills and in Segon and Kabur.

50*th.* Tobacco is sparingly cultivated in the fields adjoining villages capable of little irrigation; it is of a very coarse quality. A small quantity of vegetables arc grown in similar situatious. The Brinjal, here called (Bhanta), is also grown on the sides of ravines and Nullahs. Melons, Kakri (Cucumis utilissimus), and water-melons are grown in the sands of the Ken and Jumna, sown in January aud February, and yielding fruit from March till the rise of the river washes them away.

51*st.* The castor oil plant, *Ricinus vulgaris,* is extensively grown in the Tárri lands aloug all the rivers, and the oil is expressed and sold at 10 seers per rupee, and under its shade I have occasionally observed Turmeric grown.

52*nd*. In one estate Manpur-baryé, Pergannáh Seondá, there are extensive Pán gardens, the irrigation is derived from some ravines dammed up, which form a large pond of most irregular shape. It is sheltered on the north by a lofty hill.

53*rd*. In addition to these regular crops the Mowha tree must not be omitted. This most valuable tree *(Bassia latifolia)* is both cultivated extensively in the low lands, and grows wild in the hilly tracts of this district. In March and April, after the leaves fall it produces an abundance of fleshy, sweet-tasted, nauseous-smelling, top-shaped, pale yellow flowers at the end of the branches; these falling during the night, early in the morning the women and children go out with baskets to collect them, picking them off the ground from which the dry leaves are previously swept: the leaves are used to put under heaps of grain in the granaries and khatas.

54*th*. In June and July, the fruit ripens, the flesh is eaten, and the kernel yields abundance of very valuable oil, which is used both as food and for burning. It is frequently used to adulterate ghee. The timber is likewise excellent.

55*th*. The hills to the south of the district afford a variety of timber, but this comes principally from the independent states. Among the more useful timbers I may enumerate Bambus, Tendoo *(Diospyros melanoxylon)*, the heart wood of which is ebony, Kem *(Nauclea)*, Haldú *(Nauclea cordifolia)*, Khawá *(Pentaptera Urjuna)* producing a dark-coloured wood, Akol *(Allangium hexapetalum)* the hard wood of which is very beautiful, and Gantha *(Schrebera suritenoides)* a very hard tough timber.

56*th*. The teak is found both in the hills and plains; a considerable wood of it, in the lands of Khundeh Khas, is now growing up and merits attention. It was entirely cut down some years ago, and young trees are springing up from the roots; but no particular care is taken of them.

57*th*. Among scarped and overhanging sandstone rocks great abundance of honey is found, which is taken by a low caste named Khaticks, who build up a frail scaffolding of bambus among frightful precipices and after smoking the bees carry off the comb.

58*th*. The Chironji *(Buchanania latifolia)*, is very abundant on the hills and the fruit is exposed for sale in great quantities in every bazar,

the kernel of the stone is about the size of that of a cherry having very much the flavor of the Pistachio. The fresh fruit is sub-acid and said to be very delicious when quite fresh. I have never had an opportunity of tasting it.

59*th.* Jámon, Jamoá, and a third species of *Eugenia* found by the banks of rivers, yield small acrid fruits which are much eaten by natives.

60*th.* The Jhár-beir *(Zyzyphus nummularia vel Jujuba)* is found in every direction, the fruit is gathered and exposed for sale in the bazars. The whole bush is cut with hooks, threshed, so as to separate the leaves which are an excellent fodder for cattle and especially for sheep, and the thorny branches remaining are either used to make fences or as fuel.

61*st.* The Babul *(Acacia Arabica)*, is most abundant in the northern part of the district springing up every where spontaneously, yielding a gum, good fodder for goats, thorny branches for fences, and excellent timber for agricultural purposes.

62*nd.* There are not many gardens in the district, the depth and brackishness of the water generally being against that, however with care, plantains, oranges, limes, and shaddocks of very fine quality are produced. The Khirni and Jack fruit are rare. Phalsás and cultivated Bers are abundant. Mangoes of very inferior quality are abundant, but all attempts to introduce good varieties have failed ; the trees are said to degenerate.

63*rd.* A peculiarity in Bundlecund is the custom of preserving meadows (Rukhel) for hay, this is of the best quality principally from a sweet-scented species of Anthistiria called *Músel;* this springs up during the rain being ready for cutting in October, when it is cut and stored. The usual price in the Banda market is 1,000 bundles for the Rupee, each bundle being as much as can be contained by both spans of the hands.

64*th.* The very destructive weed Kans *(Saccharum spontaneum)*, yields a good coarse grass for thatching. .This weed has long spreading roots which strike deep into the earth, and when it has effected a lodgement it is most difficult of extirpation and almost entirely prevents any attempts at cultivation. It is said however to die out after from 5 to 8 years if left to itself. I have been endeavouring to destroy it by flooding, but my experiments failed owing to the badness of the last rainy season.

65*th*. Pyal, the soft straw of the Kodon and wild Sawank, is much used for horses' bedding.

66*th*. These are the principal articles either cultivated or collected from the jungle.

67*th*. There is another which might be made to yield a most valuable product. The Wrightea tinctoria, Dúdhi of the people here, Indarjow of other parts of India, grows in abundance on the most barren granite rocks, and yields a very large quantity of Indigo; but unfortunately its uses are unknown, and I have been unable to persuade any one here to undertake the manufacture.

68*th*. I annex a list of the plants I have found in the district, Appendix II.

69*th*. The wild animals are pretty numerous, antelopes and ravine deer* are very abundant throughout the district. Nilgáyis called Roz, are not uncommon. The Sambur (or Elk) of southern India abounds in the hills to the south of the district, and is very destructive to the crops adjoining the jungles, as are the wild hogs. Spotted deer are rare; hog-deer unknown; hares abundant. Of ferocious animals, the tiger is not rare among the hills, sometimes extending his depredations into the plains. One was killed in 1848, in the open country twenty miles from the nearest jungle. Leopards are not uncommon in the rocky hills, hyenas numerous, and wolves terribly abundant and destructive. During 1848, 73 lives were reported in the Police offices as destroyed by wolves. Consequently rewards of five Rupees for a full grown and one Rupee for cub wolves have been sanctioned, and a considerable number are brought in by the Kanjars.

70*th*. Porcupines, ichneumons and rats are common, but the latter do not seem to commit any depredation in the fields as they do in the north-west. Snakes and scorpions are exceedingly numerous. No fewer than 106 deaths from the bite of the former were reported during 1848.

(*To be continued.*)

* The 'Goat Antelope' of some, or *Gazella cora*, H Smith.—Ed.

Notice of a copy of the fourth volume of the original text of Tabary; by A. Sprenger, *Esq.* M. D. *Communicated by Sir* Henry Elliot, K. C. B.

One of the most important books which it was my good luck to find during my late missions to Lucknow, is the fourth volume of the history of Tabary (who died in A. H. 310), of which I believe no other copy is known to exist. In the collection of Colonel Taylor is the 3rd volume, and in the public library at Berlin are the 5th, (which has been printed) 10th, 11th and 12th volumes.

It is a volume in small 4to. of 451 pages, 15 lines in a page. Out of these 10 pages or five leaves are wanting: the first two leaves, and three from the body of the work: the writing is ancient and bold, and though not without errors generally very correct. I should say from the appearance the copy is five hundred years old.

The subject of this volume is already known from Professor Kosegarten's preface to his edition of the fifth volume. It contains the life of Mohammad. It ends however with the battle of the Ditch, yet the volume is not defective at the end.

The intrinsic merits of the work are not so great as might be expected. Two-thirds of the book consist of extracts from Ibn Isháq and Wáqidy, and only one-third or thereabouts contains original traditions. Some of these are very valuable, inasmuch as they contain information not to be found any where else. One of the most interesting documents of this description are extracts of letters from 'Orwah to the Khalif 'Abd al Malik b. Marwán. It would appear that the Khalif had entertained doubts on several points in the life of the prophet, and as 'Orwah was the most learned man of his age, he wrote to him to have them cleared up. 'Orwah b. al Zobayr was born in A. H. 22, and he collected traditions respecting the prophet from his father and mother who was a daughter of the first Khalif, and from 'Áyishah, a widow of Mohammad, and from other persons who had stood in intimate relation with the prophet, and owing to his extraordinary attainments in the science of the traditions and in law he was called one of the seven divines of Madynah. One of the pupils of 'Orwah was Zohry. He lived mostly at the court of 'Abd al Malik b. Marwán and of his son Hishám. Yazyd b. 'Abd al Malik

appointed him as Qádhy and he died in A. H. 124. The greater number of traditions respecting the life of Mohammad collected in the works of Ibn Isháq, a pupil of Zohry, who died in A. H. 151, as well as those collected by Abú Isháq, who died in A. H. 188, by Wáqidy who was born in A. H. 130, and died in 207, by Bokhá-ry, by Moslim and Tabary, &c., had been handed down by Zohry, and there is every reason to believe that he preserved the accounts which he had received regarding Mohammad, not only by teaching them to his pupils but by committing them to writing.

Tabary in conformity with the pedantic habit of his time, traces every tradition to an eye witness; the names of the authors from whose books he makes extracts (which are, wherever I have verified them literal) occur in the string of his isnád, but no mention is made of their writings. So that the reader who is not acquainted with the literary history of that period, is led to suppose that the traditions which his book contains had been handed down to him orally and that he was the first who wrote them down. I give an example of his isnáds: "I have been informed by Ibn Homayd that he has been informed by Salamah, who said that he had been informed by Mohammad *Ibn Isháq*, who said I have been informed by Mohammad b. Moslim *Zohry*, and by *'Ásim* b. Omar b. Qatádah and by 'Abd Allah b. Aby Bazr and by Yazyd b. Rúmán who all had it from 'Orwah and other learned men, and they had it from 'Abd Allah b. 'Abbás (who was an eye witness of the story related)." The story which follows after this isnád, is literally copied from the book of Mohammad Ibn Isháq, yet who could guess from the quotation of authorities that Tabary gives an extract from a book? In the same manner he quotes Wáqidy and other authors.

I will now examine the contents of this volume.

Page 1 to p. 58 an account of the ancestors of Mohammad. It is chiefly derived from Ibn Isháq, but the subject was treated at greater length and with more accuracy by Wáqidy. The genealogy of Mohammad must be divided into three parts. The first, that is to say, the genealogy from Abraham to 'Adnán is mythological. Mohammad maintained that he was descended from Ishmael, (though it is more likely that he was a Jocktanite,) and his followers to give more credit to his assertion made up of Jewish names a genealogy from 'Adnán to Abraham. In the

second part the relation of the Qorayshites, the tribe of Mohammad, to other tribes is symbolically expressed. Most of the genealogies of Arabic tribes must be viewed as ethnographical symbols, expressive of the mutual relation of the tribes. They apply these ethnographic symbols also to other nations. Thus in speaking of the Spaniards they would say that they are children of Rúm (the Romans) who was a brother of Yúnán (the Greeks) and Rúm and Yúnán were sons of Açfar the father of all northern nations, &c. Only the genealogy from Qoçayy to Mohammad can be regarded as historical: Mohammad was the son of 'Abd Allah, the son of 'Abd al Mottalib, the son of Háshim, the son of 'Abd Manáf the son of Qoçayy. I will not enter now on the genealogy of the Arabic tribes, though valuable the materials furnished by Tabary may be, because we have a systematic work and a dictionary on this subject, the former is called Qaláyid al Jumán, and the latter Niháyat-al-arab, both are by Qalqashandy.

P. 59. Mohammad's first journey to Syria and his acquaintance with Bahyrá from Ibn Isháq. After this one leaf is wanting.

P. 63. His marriage with Khadyjah chiefly from Ibn Isháq and Wáqidy. After his marriage Mohammad lived in the house of his wife. It was subsequently bought by Mo'awiyah, and converted into a place of worship. It is probably the same place which is visited by pilgrims as the house in which Fátimah was born. It is not far from the Ka'bah and lies to the N. E. of it.

P. 68. The re-construction and previous history of the Ka'bah. The account of the Jorhomites which occurs in this chapter, would be interesting was it not already known from the kitáb Alaghány and from Mas'údy.

P. 77. The year and date on which Mohammad received the first revelation; Tabary mentions here many original traditions. As to the year, the accounts are almost unanimous that he had completed the fortieth year of age and as to the date, some mention the 18th of Ramádhán, others the 24th of the same month and others the 17th.

P. 82. Miracles proving that he was a prophet. The chapter on miracles in the Mishkát, contains all the traditions mentioned by Tabary and many more.

P. 86. On the beginning of his mission. This is the most important point in the life of Mohammad, and as orientalists have taken

little pains to illustrate it, I extract here the information contained in Tabary.

The account followed by most biographers of Mohammad is, that contained in a tradition of 'Áyishah which runs as follows in Bokháry, edition of Dehli, p. 1. "I have been informed by Yahyá b. Bokayr that he has been informed by al Layth from 'Oqayl from Ibn Shaháb (i. e. Zohry,) from 'Orwah b. al Zobayr from 'Áyishah the mother of the faithful that she said, the first kind of inspiration which the prophet received were visions of a pious character in his sleep, whenever he had a dream it was as true and clear as the dawn of morning; after this God filled him with a love for solitude; he used to spend his time in seclusion in a cave in mount Hirâ and there he used to perform tahannoth, this means devotional exercises for several nights, and then he returned to his family. He used to take provisions with him for the time of the tahannoth, and when they were exhausted he used to return to Khadyjah, and he fetched new supplies for the same purpose. At length the truth came to him whilst he was in the cave of Hirâ. The angel came to him and said, Read. I answered, I wont read.* The angel seized me and squeezed me, as much as I could bear, then he let me go and said again, Read! I answered, I wont read. Then he seized me a third time and said, Read, in the name of thy Lord the Creator, who has created man of congealed blood, Read, for thy Lord is the most gracious. The prophet much alarmed by this apparition returned to his wife Khadyjah, and said, Wrap me up; and they did wrap him up until he was relieved from his fear. Then he told Khadyjah what had happened, and said, I fear for myself (i. e. I fear I am mad or possessed by evil spirits), and she said, God beware! He will never inflict such punishment upon thee, thou art kind to thy relations, helpest the distressed, assistest the needy, art hospitable to strangers and thou contributest towards the liquidation of the debts of others. Then Khadyjah went with him to her cousin Waraqah b. Nawfal. He was a man who had embraced the Christian religion during the time of paganism and he knew writing Hebrew, and he wrote as much of the gospel in Hebrew as God pleased that he should write. He was an old man and had become blind. Khadyjah said to

* Literally I am not reading. On the import of this idiom, see my Life of Mohammad, page 95, note.

him, "O cousin, listen to thy cousin, and Waraqah said, O cousin, what hast thou seen? The prophet told him what he had seen: Waraqah observed, This is the Nomos which God has sent down upon Moses, O that I was young, O that I might be alive when thy people will expel thee. The prophet said, Will they expel me? Yes, replied Waraqah, no man has ever brought a message like the one which thou bringest who has not been persecuted. If I was to live I should assist thee most powerfully. Waraqah died soon after. And Mohammad received no new revelation after this for some time." Ibn Isháq has received this tradition directly from Zohry. His version agrees with that of Bokháry but after the words, "God filled him with love for solitude" he only adds "and nothing was more agreeable to him than to be alone," and then the tradition ends. Waqidy had not received it directly from Zohry but from two of the pupils of Zohry, viz. Ma'mar b. Ráshid and Mohammad b. 'Abd Allah, and they both repeated the words of their master alike. His version agrees with that of Bokháry and Ibn Isháq, but it ends after the words "At length the truth came to him whilst he was in the cave of Hirâ." Tabary received this tradition by two distinct channels from Zohry. His two versions agree with each other except that in one there is a sentence more at the end than in the other; but with the version of Bokháry Tabary's version agrees only as far as the version of Wáqidy goes, viz. to the words "at length the truth came to him whilst he was on mount Hirâ." After these words Tabary's version differs from that of Bokháry not only in the expression but in the sense. Tabary's version continues after the above words: "and he (the truth or angel) came to him and said, O Mohammad, thou art the prophet of God. I fell on my knees, for I had been standing. Then I went away trembling in my whole body and I came to Khadyjah and said, Wrap me up, wrap me up, until I was relieved from my fear. Then he (the angel) came again and said, O Mohammad, thou art the messenger of God. I had previous to this second apparition been so melancholy that I had intended to throw myself down from the heighth of a mountain, and it was whilst I had this intention that he appeared to me and said, O Mohammad, I am Gabriel, and thou art the messenger of God. Then he said, Read. I answered, What shall I read? Then he seized me and squeezed me three times as much as I

could bear, then he said, Read in the name of thy Creator ; and I read and I went to Khadyjah and said, I am afraid for myself, and I related her what had happened. She answered, Be of good cheer, God will never inflict such a punishment upon thee ; thou art kind to thy relations, speakest the truth, helpest the distressed, assistest the needy, art hospitable to strangers, and contributest towards the liquidation of the debts of others. Then Khadyjah went with me to Waraqah b. Nawful and said, Listen to thy cousin. He asked me and I related him what had happened. Waraqah observed, This is the Nomos which God has sent down upon Moses. O that I was young ! O that I was alive when thy people will expel thee. I said, Will they expel me ? and he answered, Yes, no man has ever brought a message like the one which thou bringest who has not been persecuted. If I was to live I should assist thee most powerfully. The first verses of the Korân after the words Read, &c. were "Nún by the reed and what they write, &c." (Súrah 68) and "O thou covered" (Súrah 74, 1,) and "By the brightness of the morning (Súrah 93," 1,) I transcribe here the text of Tabary and that of Bokháry to enable the reader to compare them.

Text of Bokháry.

حدّثنا يحيى بن بُكير قال اخبرنا الليثُ عن عُقَيل عن ابن شهاب عن عُروة بن الزبير عن عائشة اُمّ المومنين رضى الله عنها انها قالت اوّلُ ما بُدِئَ به رسول الله صلى الله عليه وسلم من الوحى الرؤيا الصالحة فى النوم فكان لا يرى رويا الاجاءت مثل فلق الصُبح ثم حُبِّبَ اليه الخلاءُ و كان يخلو بغار حِراءٍ فيتحنَّثُ فيه وهو التعبُّدُ ليالى ذوات العَدد قبلَ ان يَنزِعَ الى اهله و يَتزوَّد لذلك ثم يرجع الى خديجةَ فيتزوّد لمثلها حتى جاءه الحق و هو فى غار حراء فجاءه الملَكُ فقال اقرء فقال فقلتُ ما انا بقارئٍ قال فاخذنى فغطَّنى حتى بلغ منى الجُهد ثم ارسلنى فقال اقرء فقلتُ ما انا بقارئٍ فاخذنى فغطنى الثانيةَ حتى بلغ منى الجهد ثم ارسلنى فقال اقرأ فقلتُ

ما انا بقارئٍ قال فاخذنی فغطّنی الثالثة ثم ارسلنی فقال اقرأ باسمِ ربک الذی خلقَ خلقَ الانسانَ من علق اقرأ و ربک الاکرم فرجع بها رسول الله صلی الله علیه و سلم یرجُف فواده فدخل علی خدیجةَ بنت خُوَیلد فقال زمّلُونی زملونی نزملوه حتی ذهب عنه الرَّوعُ فقال لخدیجة و اخبرها الخبر لقد خشیتُ علی نفسی فقالت خدیجة کلا و الله ما یخزیک الله ابدًا انّک لتصل الرحمَ و تحمل الکل و تکسب المعدومَ و تقری الضیفَ و تعین علی نوائب الحق فانطلقت به خدیجة حتی اتت به وَرَقة بن نوفل بن اسد بن عبدالعزی بنَ عم خدیجة وکان امرأ تنصر فی الجاهلیة وکان یکتب الکتابَ العبْرانی فیکتب من الانجیل بالعبرانیة ما شاءالله ان یکتب وکان شیخا کبیراً قد عمی فقالت له خدیجةُ یا ابن عم اسمَع ابنَ اخیک فقال له ورقةُ یا ابن اخی ما ذا تری فاخبره رسول الله صلی الله علیه وسلم خبر ماراٰی فقال له ورقة هذا الناموسُ الذی نزل الله علی موسی یا لیتنی فیها جَذَع یا لیتنی اکون حیا اذ یخرجک قومُک فقال رسول الله صلی الله علیه و سلم أومُخْرجیّ هم قال نعم لم یاتِ رجل قط بمثل ما جئتَ به الّا عُودیَ وان یدرکنی یومک انصرک نصرًا مُؤزرًا ثم لم ینشب ورقة ان توفی و فتر الوحی *

Text of Tabary.

فحدثنی احمد بن عثمن المعروف بابی الجوزا قال حدثنا وهب بن جریر قال حدثنا ابی قال سمعتُ النعمن بن راشد یحدث

عن الزهرى عن عُروة عن عائشة انها قالت كان اول ماء يبدئ به رسول الله صلى الله عليه وسلم من الوحى الرويا الصادقة كانت تجي مثل فلق الصبح و حُبّبَ اليه الخلا فكان بغار بحرى يتحنث فيه الليالى ذوات العدد قبل ان يرجع الى اهله فيتَزوَّد حتى فجيهُ الحقُ فاتاه فقال يا محمد انت رسول الله صلى الله عليه فجثوتُ لركبتى وانا قائم ثم رجفت ترجف بوادري ثم دخلت على خديجة فقلت زملونى زملونى حتى ذهب عنى الروع ثم اتانى فقال يا محمد انت رسول الله قال فلقد هممت ان اطرح نفسى من خالق من جبل فَتَبدَّالى حين هممت بذلك فقال يا محمدانا جبريل وانت رسول الله ثم قال اقرأ قلتُ ما اقرأُ قال فاخذنى فغطنى ثلث مرات حتى بلغ منى الجهد ثم قال اقرأ باسم ربك الذى خلق فقرأتُ فاتيتُ خديجةَ فقلت لقد اشفقتُ على نفسى فاخبرتها خبرى فقالت ابشر فوالله لايخزيك الله ابدا والله انك لتصل الرحمَ و تصدق الحديثَ وتودي الا مانة وتحمل الكلّ وتقرى الضيف وتعين على نوائب الحق ثم انطلقت بى الى ورقةَ بن نوفلِ بن اسد وقالت اسمع من ابن اخيك فسالَنى فاخبرته خبرى فقال هذا الناموس الذى أُنزل على موسى ليتنى فيها جذع ليتنى اكون حيًّا حين يخرجك قومك قلتُ أُمخرجيَّ هم قال نعم انه لم يجئ رجلٌ قط بما جئتَ به الّا عُودى ولئن ادركنى يومك انصرك نصرا مؤزرا ثم كان اول ما نزل عليه من القرآن بعد اقرأ نون والقلم وما يسطرون

ما انت بنعمة ربک بمجنون وان لک لاَجْراً غیر ممنون وانک لعلی
خُلُقٍ عظیم فستبصر ویبصرون ویا ایها المُدَّثّرقم فانذر والضحی
واللیل اذا سجی حدثنی یونس بن عبدالاعلی قال اخبرنا ابن
وهب قال اخبرنی یونس عن ابن شهاب قال حدثنی عروة ان
عائشة خبرته ثم ذکر نحوه غیرانه لم یقل کان من اول ما انزل علی
من القرآن الی آخره *

The results of the comparison of the versions of this tradition are:

1. The first lines are the same in all versions.

2. The oldest version, that of Ibn Isháq, who died in A. H. 151, is the shortest, in that of Wáqidy who died in A. H. 207, only one sentence is added to that of Ibn Isháq, in the version of Bokháry who died in 256, and of Moslim many details are added which are contradicted by other traditions, contained in the collections of the very same authors. And finally, the version of Tabary, which is the most modern, he having died in A. H. 310, contains at the end some additions to the version of Bokháry, and though, in some respects more correct, is much more confused. It is clear that the tradition is only as far genuine as it goes in Ibn Isháq or in Wáqidy. The reader will observe that as far as the tradition goes in Wáqidy 'Áyishah is speaking, and the prophet is introduced in the third person. The apparition of the angel is related by Mahommed himself, and he speaks in the first person, and in the visit to Waraqah, Mahommed is again introduced in the third person. This leads us to suspect that Bokháry has put three distinct traditions into one, and it will appear from what follows, that each of them is genuine and correct in itself, but that the connexion into which they are brought here is wrong. Tabary in his version of the tradition of 'Áyishah, has equally put three distinct traditions together, but he differs from Bokhary in the order. This shows clearly that they were originally separate.

After this tradition of 'Áyishah, Tabary transcribes from Ibn Isháq the account of what led Mahommed to declare himself a prophet. This account had been communicated to Ibn Isháq by Wahb b. Kaysán,

who had it from 'Obayd b. 'Omayr b. Qatádah, but it can not be called a tradition in the same sense as the sayings collected by Bokhâry or Tirmidzy, for it is evident from the wording that Ibn Isháq does not give the text, but only the sense of the story whereas in genuine traditions, it is supposed that the words used by the prophet, or his companions have been faithfully preserved.

This account is somewhat abridged in Abúlfida, edition Adler, I. p. 26, and in every biography of Mohammad ; it would therefore be superfluous to insert here the text or a literal translation. I will merely mention the heads. Mohammad used annually to spend one month in mount Hirá, to perform certain religious ceremonies, which it was usual with the pious men of his tribe, to go through in the same sacred locality. When he had attained his fortieth year of age, and was engaged in these devotional exercises, he had a dream (according to others the angel appeared to him whilst he was walking), in which the angel Gabriel ordered him to read. Here follows a passage in Tabary's text, which is wanting in both copies of Ibn Isháq which I have. The reason of this discrepancy is that the text of Ibn Isháq in general use is that of Ibn Hishám, who had it from Bakáyy who it is said by Sam'ány, was a great liar, and Tabary had his from Ibn Homayd, who had it from Salamah, a pupil of Ibn Isháq. The passage in question runs :

قال ولم يكن من خلق الله احد ابغض الى من شاعر او مجنون
كنت لا اطيق ان انظر اليهما قال قلت ان الابعد يعنى نفسه لشاعر
اومجنون لا يحدث بها عنى قريش ابدا لاعمدن الى خالق من الجبل
فلاطرحن نفسى منه فلا قتلنها فلا ستريحن قال فخرجت اريد ذلك *

"Nothing was more odious to me than poets or madmen (in one version of this saying of Mohammad which is recorded by Wáqidy, it is said 'soothsayers' كاهن), I could not look at them. I therefore said to Khadyjah, He who was the last person of whom such a thing would have been expected, [by this expression he meant himself] is certainly a poet or a madman. But the Qorayshites shall never say such a thing

of me, I will certainly rather go to the top of a hill and throw myself down and kill myself and have rest. (It appears from numerous passages of the Qorân that the Qorayshites did really accuse him of being merely a poet or a soothsayer or mad;) I went away with the intention of destroying myself (what follows is in Ibn Hishám's castigated edition of Ibn Isháq). When I was in the middle of the mountain I heard a voice, &c." The angel appears to him and tells him that he is the prophet of God. This apparition of the angel is twice alluded to in the Qorân. When he comes home he again expresses his fear of being mad, and says to Khadyjah, He who is the last person on earth of whom such a thing was to be expected is certainly a poet or he is a madman. This passage is again omitted by Ibn Hishám. It runs in the original قلت لها ان الابعد لشاعر اوهو مجنون. And now Khadyjah went to Waraqah, and it was on this occasion that the conversation took place mentioned by Bokháry.

As in Bokhary's version of the tradition of 'Áyishah, thus in this account of Ibn Isháq only the beginning, that is to say, the story in which Mohammad is ordered to read, is exact; in the other details the facts are not correctly put together. And this observation applies generally to most traditions in which more than one fact is recorded.

It is admitted by all authors that Waraqah was dead when Mohammad assumed his office, and it will appear from what follows that Mohammad assumed his office immediately after the angel had detained him from committing suicide; the visit to Waraqah must therefore have taken place before this apparition. As Mohammad resided in the quarter of Makkah, inhabited by the Asadites, and as Waraqah the cousin of his wife was an Asadite, he was probably his neighbour; such visits may therefore have been frequently repeated, and it is apparently for this reason, that the accounts of the interview with Waraqah differ so much from each other: they refer to different visits. Bokháry says that Khadyjah went with her husband to Waraqah, after the fit in which he was ordered to read. Ibn Isháq says, that she went by herself and that Mahommed subsequently met Waraqah at the Ka'bah, and in another tradition of Ibn Isháq it is said, that she sent Abú Bakr to Waraqah. The latter tradition is so interesting that I make no apology for transcribing it here from the Oyún alathr: "The prophet said to Khadyjah, When I was alone I heard a call (or

a voice), I fear it is not all right with me. Khadyjah replied, God beware! such will never happen, for thou keepest to thy engagements, art kind to thy relations, aud speakest the truth. Subsequently Abú Bakr came and Mohammad was absent, Khadyjah mentioned to him the circumstance and said, Go with Mohammad to Waraqah: when Mohammad came in, Abú Bakr said, Let us go to Waraqah. Mohammad asked, Who has told thee? and he answered, Khadyjah: they went and they told him every thing. Mohammad said, When I was alone I heard a voice from behind calling Mohammad! Mohammad! I ran away from it, taking flight. Waraqah said, Thou must not do that; when thou hearest the voice again, stand still and listen what the voice has to say and come to me and tell me. Mohammad again heard the voice "O Mohammad! O Mohammad!" In the name of the Merciful and Compassionate God. The voice recited the first Súrah of the Qorân and added. "There is no God but the God," Mahommed went to Waraqah, and told him what had happened. Waraqah said, "Be of good cheer, I bear witness that thou art (the Paraclete) whom Christ has predicted, and that thou hast the prospect of something like the law of Moses, that thou art a prophet sent by God, that thou wilt be ordered to carry on sacred wars after the day may have come. O that I was alive at that time! I should certainly assist thee in thy struggles. When Waraqah had died, Mohammad said, I have seen the priest in Paradise dressed in a robe of silk. He has certainly believed in me, and declared that I spoke the truth."

وفى رواية يونس عن ابن اسحق بسنده الى ابى ميسرة عمرو بن شرحبيل ان رسول الله صلى الله عليه وسلم قال لخديجة انى اذا خلوتُ وحدى سمعت نداء وقد خشيت والله ان يكون لهذا امر قالت معاذ الله ماكان الله ليفعل ذلک بك فو الله انک لتودى الامانة وتصل الرحمَ وتصدق الحديث فلما دخل ابوبكر وليس رسول الله صلى الله عليه وسلم ثُمَّ ذكرت خديجة له فقالت يا عتيق اخذ ابوبكر بيده وقالت انطلق بذا الى ورقة فقال ومن اخبرک قال خديجة

فانطلقا عليه فقصّا عليه فقال انى اذا خلوتُ وحدى سمعت ندا
خلفى يامحمد يامحمد فانطلق ها ربالک ثم ايتنى فاخبرنى فلماخلاانادا
يا محمد يا محمد قل بسم الله الرحمن الرحيم الحمد لله رب العالمين
حتى بلغ ولا الضالين قل لا اله الا الله فاتى ورقة فذكرله ذلك فقال
له ورقة ابشر فانا اشهد انّک الذى بَشَّربه ابن مريم وانک على مثل
ناموس موسى وانّک نبى مرسلٌ وانّک ستومربا لجهاد بعديومک
هذا ولئن ادركنى ذلک لاجاهدنّ معک فلما توفى ورقة قال رسول
الله صلى الله عليه وسلم لقد رايتُ القَسّ فى الجنة وعليه ثياب حرير
لانه آمَن بى وصدقنى *

That Mohammad was subject to hallucinations of his senses for several years is attested by a tradition in the Mishkât, that he was considered a madman is allowed in the Qorân, and that Waraqah was consulted regarding his state of mind, is stated in two traditions preserved by Wáqidy, but that he so early duped his friends, though probable, appears as far as I know only from this tradition.

In Bal'amy's Persian translation of Tabary, it is stated on the occasion of Khadyjah's visit to Waraqah, that she was acquainted with the history of the prophets and had read the scriptures. No mention of this fact is made in the Arabic text with which in truth the Persian translation has very little in common.

After Mohammad had received the first revelation, an intermission of revelations took place, which according to a tradition in the Miskât lasted six months, or two years, or two years and a half. The latter period squares best with other facts. It is stated in Bokhâry's version of the tradition of Ayishah, that Mohammad after the vision in which he was ordered to read went to his wife, and said, "Wrap me up," and that the intermission of revelation took place after this event. In a tradition of Jábir, equally recorded by Bokhâry, it is stated that the scene on the occasion of which the Súrah of the Qorán was revealed,

which begins with the words "Wrap me up," took place after the intermission of revelation. It is also stated in Bokhâry that they not only wrapped him up but poured cold water over him, which leaves us to infer that he had a fit. The tradition of Jábir is also in Tabary in the same terms as in Bokhâry, and there is besides another tradition mentioned on the same subject which I transcribe here. Zohry says, "No revelation came to the prophet for some time. He was very sorrowful at this intermission, and went to the summits of mountains to throw himself down from them. But as often as he was at the top of a mountain, Gabriel appeared to him and said, Thou art the prophet of God. This cooled his excitement and gave him again courage. Mohammad used to mention this subject, saying, "One day whilst I was walking I saw the angel, who had appeared to me (in a dream) on mount Hirá. He was sitting on a throne between heaven and earth. Being much frightened by this apparition, I returned to Khadyjah and said, 'Wrap me up,' and we, (says Khadyjah,) did wrap him up ;" and then the verse of the Qorân was revealed. "O thou wrapped up," &c.

حدثنا محمد بن عبد الاعلى قال حدثنا ابن ايوب عن معمر
عن الزهرى قال فترالوحى عن رسول الله صلى الله عليه وسلم فترة فحزن
حزنا جعل يعدو الى رؤس شواهق الجبال ليتردا منها فكلما دنى
بذروة جبل تبدى له جبريل صلى الله عليهما فيقول انك نبى الله
فيسكن لذلك جاشه و ترجع اليه نفسه فكان النبى صلى الله عليه وسلم
يحدث عن ذلك قال فبينما انا امشى يوما اذرايت الملك الذى
كان ياتينى بحرى على كرسىّ بين السماء والارض فحمست منه
رُعْبا فرجعتُ الى خد يجة فقلتُ زَمِّلونى فزملناه اى فدثرناه
فانزل الله عزوجل يا ايها المدثر قُم فانذر وربك فكبّر وثيابك
فطهر قال الزهرى فكان اول شئى انزل عليه اقرا باسم ربك الذى
خلق حتى بلغ مالم يعلم *

It will be observed that there is a contradiction in this tradition. In the first part it is stated that the angel Gabriel appeared to Mohammad several times and spoke to him. Then follows an account in Mohammad's own words from which it would appear, that he saw Gabriel only once, and that he did not speak with him. The latter statement agrees with the Qorân 81, 23. Instead of the statement in the first part of this tradition, we read in other accounts as often as Mohammad was on the point of throwing himself down a precipice, an invisible power kept him back.

This apparition of the angel and the fit by which it was followed ended the intermission of revelations, and henceforth we are told, in the tradition of Jábir, just alluded to, one revelation followed another.

This period in the life of Mohammad, is by far the most interesting, yet nothing has been done by orientalists towards illustrating it from original sources. I do not call the Tárykh Khamys or Abúlfidá or the Insán-aloyún, nor the 'Oyún-alathr original sources, though the latter consists almost entirely of traditions and is very valuable. I may therefore be excused, if I add here the résumé of the preceding observations.

1. Mohammad had dreams of a religious character. It is said this period lasted six months, and as his prophetic career lasted in all twenty years in round numbers, therefore the Musulmáns say, that such dreams are the fortieth part of prophecy.

2. He loved solitude and performed ascetic exercises, on mount Hirâ in conformity with the habits and rites of his pagan fathers.

3. Soon after he had attained forty years of age, he had a dream in which he was ordered to read, and this is considered as the first revelation, but he did not immediately assume his office. This is called the beginning of the nabúwat.

4. The intermission of revelations takes place, which lasted two years and a half. During this time, we have good reasons to believe he prepared himself for his office.

5. It was during this period, that Waraqah declared that Mohammad was not insane, nor possessed by evil spirits but that he was a prophet.

6. The angel appears to him and prevents him from committing suicide; he has a fit and declares himself a prophet. This is called the beginning of the risálat. For a further illustration I refer the reader to my life of Mohammad, pp. 94 to 112.

Page 98. Abú Jáfar (i. e. Tabary) observes: "The first law of the code of the Islám, which was given by God to Mohammad, after there had been established the unity of God and the abjuring idolatry and polytheism, was the injunction of prayers."

قال ابوجعفر ثم كان اول شي فرض الله عزوجل من شرايع الاسلام عليه بعد الاقرار بالتوحيد ويلبرآة من الاوثان والاصنام وخلع الانداد الصلاة فيما ذكر *

Many authors place the promulgation of the law of prayer (erroneously) eighteen months before the Hijrah; this passage which rectifies this error is of some importance. Tabary transcribes the circumstances under which Mohammad received this law from Ibn Isháq.

Page 99. The tradition of Anas on the transfiguration or ascension to heaven of Mahommed. This is the most celebrated tradition on this subject, and is also in the Mishkát, in the Taysyr, in the Shifá, &c., but the version in Tabary differs in some points from the usual version.

Page 181. On the first followers of Mohammad, Tabary inserts the statements of Ibn Isháq and Wáqidy, and gives same original traditions. The most striking tradition is the following of Mohammad b. Sa'd, "I asked my father: Was Abú Bakr the first among you who embraced the Islám? He answered no—more than fifty men had embraced it before him, but he was the most distinguished in religious zeal among us."

قلت لابى اكان ابو بكر اولكم اسلاما فقال لا ولقد اسلم قبله اكثر من خمسين ولكن كان افضلنا اسلاما *

There is a great deal of sectarian spirit mixt up in the disputes, who were the first believers? The Sunnies say Abú Bakr, and the Shiahs say Aly.

Tabary was one of the greatest commentators to the Qorân, and in the narrative of the first attempts of Mohammad to spread his religion, and of the persecution of the Oosayshites, he constantly refers to the Qorân and shows on what occasion many of the verses of that book were revealed. This is exceedingly valuable, for it is not easy to bring the Qorân in connexion with the life of its author,

Page 126. A letter of 'Orwah to the Khalif 'Abd al-Malik b. Marwân which I transcribe here. "At first when he, that is to say, the Messenger of God, preached to his people the doctrine which God had revealed to him, and began to diffuse the light which God had sent to him, they did not much differ from him, and they were half inclined to listen to him, (i. e. to follow him,) but when he mentioned their Taghúts, shrines of idolatrous worship, there came some men of the Qoraysh tribe, from Táyif who had property. They denied the truth of what he said, they were very violent against him and disapproved of his preaching, and they encouraged their followers to be insolent against him, and the generality of the people left him, and only those whom God preserved remained staunch. They were few, and matters remained thus, as long as God had decreed that they should remain. At length the heads of the families of Makkah agreed to force those of their children, brothers and kinsmen, who followed him, to forsake the religion of God. This persecution entailed great hardships upon his followers. Some forsook him, but as many as God pleased, remained staunch. When the Moslims were exposed to these persecutions, the prophet ordered them to emigrate into Abessynia. In Abessynia there was a righteous king whose name was Najáshy. No one in his country had to suffer injustice. Abessynia was a place of commerce for the Qorayshites, where they found protection and made a very good profit. It was altogether a good market. The prophet ordered them to emigrate thither, and the common people (who had no protection) from among the Moslims went thither to avoid the persecutions at Makkah; but he himself remained and did not go away. This state of things continued for some years, the Qorayshites were very violent against the followers of the new religion. After that it spread, and men from among their nobles embraced it."

حدثنا علي بن نصر بن علي الجهضمي و عبد الوارث بن عبد الصمد بن عبد الوارث وقال عبد الوارث حدثني ابي قال حدثنا ابان الوطار قال حدثنا هشام بن عُروه عن عروة انه كتب الى عبد الملك بن مروان اما بعد فانه يعني رسول الله صلى الله عليه و سلم لما دعا قومه بما بعثه الله له من الهدى والنور الذي انزل عليه لم يبعد وامنه

اول ما دعاهم و كادوا يستمعون له حتى ذكر طواغيتهم و قدم ناس من الطايف من قريش لهم اموال انكروا ذلك عليه و اشتدوا عليه وكرهوا ما قال و اعزوا به من اطاعهم فانصفق منه عامة الناس الا من حفظه الله عزوجل منهم و هم قليل فمكث بذلك ما قدر الله ان يمكث ثم ائتمرت رؤوسهم بان يفتنوا من تبعه عن دين الله من ابنائهم واخواتهم وقبائلهم فكانت فتنة شديدة الزلزال على من اتبع رسول الله صلى الله عليه وسلم من اهل الاسلام فافتتن من افتتن وعصم الله منهم من شاء فلما فعل ذلك بالمسلمين امرهم رسول الله صلى الله عليه وسلم ان يخرجوا الى ارض الحبشة وكان بالحبشة ملك صالح يقال له النجاشي لايظلم احدٌ بارضه و كان يُثني عليه مع ذلك صلاح وكان ارض الحبشة متجرا لقريش يتجرون فيها يجدون فيها رفاعا من الرزق امنا ومتجرا حسنا فامرهم بها رسول الله صلى الله عليه وسلم فذهب اليها عامتهم لما قهروا بمكة وخاف عليهم الفتن ومكث هو فلم يبرح فمكث بذلك سنوات يشتدون على من اسلم منهم ثم انه فشا الاسلام فيها ودخل فيها رجالٌ من ذوى اشرافهم *

The aversion which the Qorayshites conceived against Mohammad on account of his attacks on their idols, caused him to come to a compromise with their religion, and this is the most important feature in his creed, for had he preached Deism and borrowed from the tenets of the Jews and Christians, his sect would have merged into the Christian religion in measure, as his followers proceeded in knowledge, but the admixture of the pagan rites of the Ka'bah made the Islám national, and were an insuperable barrier against such a union. In one instance Mohammad, in writing a pretended revelation appears to have acknowledged the efficacy of prayers offered to the idols of the Ka'bah. Tabary, pages 140 *et seq.*, gives two most important traditions on this head, the former is taken from Ibn Isháq, yet I cannot find it in the two copies of that author, and it seems to have been omitted from the edition, which has been preserved, by the lying Bakáyy or by Ibn Hishám. I therefore insert it. The second tradition agrees almost literally with a tradition in Wáqidy, who gives the following autho-

rity for it: Yúnos b. Moh. b. Fodhálah Tzafary, who had it from his father. His Secretary Ibn Sa'd added another authority, viz. Kabis b. Zayd from al-Mottalib b. 'Abd Allah b. Hantib حنطب.

The first tradition runs in Tabary: When the prophet saw that his people forsook him, he was much grieved to observe that they turned away from the revelation which he brought from God. He therefore conceived a desire in his mind, that God might send him a revelation calculated to conciliate his people to him. And filled as he was with a love for his people, and with a wish for a union with them, he cherished the idea that there might be some means of alleviating the persecutions to which he was exposed from them, and he went so far as to meditate on it, and to wish for it; whilst his mind was thus occupied, God sent him the revelation (Súrah 53): "By the star when it passes on away," &c., aud when he came to the words "Do you see the idol al-Lát and al-'Ozzá and Manáh who is the third?" the devil prompted him to say that which he (Mohammad) had revolved in his own mind, and what he had wished, that it might be sent through him to his people, viz. "Do you see 'those noble swans? their intercession will be graciously received by God.' When the Qorayshites heard this they were delighted, and they were pleased with the manner in which he had mentioned their gods, and they listened to him. As to his followers they were persuaded that whatever message their prophet brought them from God, was without error or mistake. And when he came to the end of the Súrah, where it is said, and therefore, "Fall down before God and worship him," he prostrated himself, and his followers did the same, acknowledging herewith that they considered what their prophet had said was true and in obedience to his order; and every man who was present in the place of worship, observed this ceremony, the idolaters among the Qorayshites not excepted, they being satisfied by the manner in which he had spoken of their gods. There was not a man in the place of worship, whether Moslim or unbeliever, who did not prostrate himself, except al-Walyd b. al-Moghyrah. He was very old (and unable to touch the ground with his forehead), and he therefore, took up a handful of gravel from the ground and touched his forehead with it. After this they left the place of worship, and the Qorayshites dispersed, much pleased with the manner in which he had mentioned their gods, and they said Mohammad has spoken of our

gods in the most handsome manner. He has expressed when he read a revelation, that they were the heavenly swans, and that their intercession would be graciously received by God. The followers of Mohammad who had emigrated to Abessynia, heard that the Qorayshites had prostrated themselves with Mohammad, and they were informed that the Qorayishites had embraced the Islám. Some of them, therefore, left Abessynia and others remained. The angel Gabriel came to Mohammad and said, What hast thou done? Thou hast read before the people a sentence, which I have not brought to thee from God, and thou hast said what thou hadst not been told. Mohammad was exceedingly sorrowful at his error, and he feared the punishment of God. God was merciful to him, and with a view of consoling him, and to convince him that the fault was not so great, he revealed a verse to him to show that there had not been a prophet nor a messenger before him, who had not entertained desires and wishes like him, and that the devil mixed with the wishes of former prophets his own inspirations in the same manner as he (the devil) spoke through the tongue of Mohammad. God abrogated the words prompted by the devil, and confirmed his own revelation, viz. Thou art like some of the prophets and messengers, God revealed to this purpose the words (Qorân 22, 51): "We have sent no messenger nor a prophet before thee, but if he had a desire of his own the devil prompted him some thing (which had the appearance of a heavenly inspiration,) consonant with his wishes, but God abrogates what Satan prompts, and God confirms his signs, for God is knowing and wise." In this manner God relieved his prophet from sorrow, and assured him that he had no cause to fear, and he made void what Satan had prompted regarding the noble swans, and the efficacy of their intercession. Instead of the words of Satan, God placed after the mention of al-Lát, al-'Ozzá and Manáh, the verses which we now read in the Qorân, viz. "Have you male children, and do you think that God has girls (the idols were considered as the daughters of God, and to have daughters was considered ignominious for a family among the Arabs), this is a perverse division! These (viz. al-Lát, al-'Ozzá and Manáh) are only epithets of God, (al-Lát is the feminine of Allah; 'Ozzá of 'Azyz, high, sublime, and Manáh means merciful,) which you and your fathers have given to the idols. God has not revealed (to me) concerning them any thing to authorize their worship. They follow no other than a

vain opinion and what the hearts desire,—yet there has come unto them, the true direction from God. Shall man have what he wishes? The present life and the life to come are God's, and how many angels soever there be in the heavens, their intercession shall be of no avail until after God shall have granted permission unto whom he shall please and shall accept." And therefore, if the intermission of the angels is not accepted by God, how shall that of your idols be acceptable to him? When God had expunged the words which Satan had prompted to the prophet from the Qorân, the Qorayshites said, Mohammad has repented his having attributed to our gods, so high a position in the sight of Allah, he changed what he said and put another passage in its place. The two sentences which the devil had prompted to Mohammad, had fallen into the mouth of the unbelievers, and they became more malicious against the Moslims than they had been before, and increased the persecution. Meanwhile those who on hearing the news that the Qorayshites had embraced the Islám had left Abessynia, arrived in the neighbourhood of Makkah; there they learned that what they had heard of the conversion of the Makkians was premature, and therefore those few of them who entered Makkah did so secretly, or under the protection of some friend. The following men did, on this occasion, come to Makkah, and remained there until the flight to Madynah took place. Of the family of 'Abd Shams remained 'Othman b. 'Affan with his wife Royayyah who was a daughter of the prophet, and Abú Hodzayfah b. 'Otbah b. Raby'ah b. 'Abd Shams, and with him was his wife Sahlah a daughter of Sohayl and some others, there were in all thirty men."

Tabary has a second tradition on the same subject. It rests ultimately like the preceding on the authority of Mohammad b. Ka'b Qoratzy backed by the authority of Mohammad b. Qays, and it seems that it was first taken to paper by Abú Ma'shar, one of their pupils. This Abú Ma'shar is probably not identical with the astronomer of that name, for the latter was born in A. H. 190 and died in A. H. 272; and the former is occasionally mentioned as an authority of Wáqidy who died in A. H. 207.

The tradition runs: "The prophet was sitting in the society of some Qorayshite chiefs (Waqidy adds, round the Ka'bah,) and he wished very much that God might not send him such revelations as were calculated to turn his people away from him. God revealed to him 'By the star

when it passes away,' &c. The prophet read the Súrah as far as the words 'Do you see al-Lát, al 'Ozzá and Manáh?' and the devil prompted him these two sentences: 'Those noble swans; their intercession will be graciously received by God,' and having spoken of the idols, he continued and read the Súrah to the end," &c.

حدثنا ابن حميد قال حدثنا سلمة قال حدثني محمد بن اسحٰق عن يزيد بن زياد المدني عن محمد عن محمد بن كعب القرظي قال لما راى رسول الله صلى الله عليه وسلم تولى قومه عنه وشق عليه ما يرى من مبا عدتهم ما جا بهم من الله عزوجل تمنى في نفسه ان ياتيه من الله عزوجل ما يقارب بينه وبين قومه وكان يسره مع حبه قومه وحرصه عليهم أن يلين له بعض ما قد غلظ عليه من امرهم حتى حدث بذلك نفسه وتمناه واحبه فانزل الله عزوجل والنجم اذا هوى ما ضل صاحبكم وما غوى وما ينطق عن الهوى فلما انتهى الى قول الله عزوجل افرأيتم اللاتَ والعزى ومناةَ الثالثة الاخرى القى الشيطان على لسانه لما كان يحدث به نفسه ويمنى ان ياتى به قومه تلك الغرانيق العلى وان شفاعتهن لترتجى فلما سمعت ذلك قريش فرحوا وسرهم واعجبهم ماذكر به الهتهم واصاخوا له والمومنون مصدقون نبيهم فيما جاهم عن ربهم ولا يتهمونه على خطأ ولا وهم ولا زلل فلما انتهى الى السجدة منها وختم السورةَ سجد فيها فسجد المسلمون بسجود نبيهم تصديقا لما جاء به واتباعا لامره وسجد من في المسجد من المشركين من قريش وغيرهم لما سمعوا من ذكر الهتهم فلم يبق في المسجد مومنٌ ولا كافر إلّا سَجَدَ الا الوليد بن المغيرة فانه كان شيخا كبيرا فاخذ حفنة من البطحاء فسجد عليها ثم تفرق الناس من المسجد وخرجت قريش وقد سرهم ما سمعوا من ذكر الهتهم يقولون قد ذكر محمد الهتنا باحسن الذكر قد زعم فيما يتلو انها الغرانيق العلى وان شفاعتهن ترتجى وبلغت السجدة مَن بارض الحبشة من اصحاب رسول الله صلى الله عليه وسلم وقيل

اسلمت قريش فنهض منهم رجال و تخلف آخرون واتى جبريل رسول الله صلى الله عليه و سلم فقال يا محمد ماذا صنعت لقد تلوت على الناس مالم آتك به عن الله عزوجل وقلتَ مالم يُقل لك فحزن رسول الله صلى الله عليه وسلم عندذلك حزنا شديدا وخاف من الله خوفاً كثيراً فانزل الله عزوجل و كان به رحيما يعزيه و يخفض عليه الامرو يجبره انه لم يكن قبله نبى ولا رسول تمنى كما تمنى ولا احب كما احب الا والشيطان قد القى فى امنيته كما القى على لسانه صلى الله عليه فينسخ الله ما القى الشيطان واحكم اياته اى فانما انت كبعض الانبياء فانزل الله عزوجل وما ارسلنا قبلك من رسول ولا نبى الا اذا تمنى القى الشيطان فى امنيته فينسخ الله ما يلقى الشيطان ثم يحكم الله آياته و الله عليم حكيم فاذهب الله عزوجل عن نبيه الحزن وآمنه من الذى كان يخاف ونسخ ما القى الشيطان على لسانه من ذكر الهتهم انها الغرانيق العلى وان شفاعتهن لترتضى يقول الله عزوجل حين ذكر اللات والعزى ومناة الثالثة الاخرى الكم الذكر وله الانثى تلك اذا قسمة ضيزى اى عوجا ان هى الّا اسماء سميتموها انتم الى قوله لمن يشا و يرضى اى فكيف ينفع شفاعة الهتكم عنده فلما جاء من الله عزوجل مانسخ ما كان القى على لسان نبيه قالت قريش ندم محمد على ما ذكر من منزلة الهتكم عند الله فغيرذلك وجاء بغيره وكان ذَالكَ الحرفان اللذان القى الشيطان على لسان رسول الله صلى الله عليه وسلم قد وقع فى فم كل مشرك فازدادوا شرا الى ما كانوا عليه و شدة على من اسلم واتبع رسول الله صلّى الله عليه وسلم منهم واقبل اولئك النفر من اصحاب رسول الله عليه وسلم الذين خرجوا اليه من ارض الحبشة لما بلغهم من اسلام اهل مكة حين سجدوا مع رسول الله صلى الله وسلم حتى اذا دنوا من مكة بلغهم الذى كان تحدثوا به من اسلام اهل مكة بالملاء فلم يدخل منهم احدٌ الا بجوار مستخفيًا فكان من قدم مكة منهم فاقام بها حتى هاجر الى المدينة

فشهد معه بدرا من نبى عبد شمس بن عبد مناف بن قصى عثمان بن عفان بن ابى العاص بن امية معه امرءته رقيه بنت رسول الله صلى الله وسلم وابو حذيفة بن عتبه بن ربيعة بن عبد شمس معه امراته سهلة بنت سهيل و جماعة آخر معهم عددهم ثلثة وثلثون رجلا *

حدثنى القسم بن الحسن قال حدثنا الحسن بن داوُد قال حدثنى الحجاج قال عن ابى معشر عن محمد بن كعب القرظى ومحمد بن قيس قالا جلس رسول الله صلى الله عليه وسلم فى ناد من اندية قريش كبير اهله فتمنى يومئذ ان لايا تيه من الله شى فينفرد عنه فانزل الله عزوجل والنجم اذا هوى ماضل صاحبكم وما غوى فقراها رسول الله صلى الله عليه حتى اذا بلغ افرايتم اللات والعزى ومناة الثالثة الاخرى فالقى الشيطان كلمتين تلك الغرانيق العلى وان شفاعتهن لترتجى فتكلم بها ثم مضى فقرا السورة كلها فسجد في آخر السجدة وسجد القوم معه جميعا ودفع الوليد بن المغيرة ترابا الى جبهته فسجد عليه وكان شيخا كبيرًا لا يقدر على السجود فرضوا بماتكلم به وقالوا قد عزلنا ان الله يحيى ويميت وهو الذى يخلق ويرزق ولكن الهتنا لهذه تشفع لنا عنده فاذا جعلت لها نصيبا فنحن معك قال فلما امسى اتاه جبريل صلى الله عليهما فعرض عليه السورة فلما بلغ الكلمتين اللتين القى الشيطان عليه قال ماجئتك بهاتين فقال رسول الله صلى الله عليه وسلم افتريتُ على الله وقلتُ على الله عزوجل مالم يقل فاوحى الله عزوجل اليه وان كادوا ليفتنونك عن الذى اوحينا اليك لتفترى علينا غيره الى قوله ثم لاتجد لك علينا نصيرًا فما زال مغمومًا مهمومًا حتى نزلت وما ارسلنا من قبلك من رسول ولا نبىّ الى قوله والله عزيزٌ حكيمٌ قال فسمع من كان بارض الحبشة مِن المهاجرين ان اهل مكة قداسلموا كلهم فرجعوا الى عشائرهم وقالوا هم احَبُّ الينا فوجد القوم قد ارتكسوا حين نسخ الله ما القى الشيطانُ ثم قام *

The authenticity of this story has been doubted by prejudiced Moslims, but it has been proved beyond a doubt in the Mawáhib Alladannyyah. I transcribe here this important passage though it is not free from faults.

قد قيل ان هذه القصة من وضع الزنادقة لا اصل لها و ليس كذالك بل لها اصل فقد خرجها ابن ابى حاتم و الطبرى و ابن المنذر من طرق و كذا ابن مردويه و البزاز و ابن اسحق فى السيرة و موسى بن عقبه فى المغازى و ابو معشر فى السيرة كمانبه عليه الحافظ عماد الدين ابن كثير و غيره لكن قال ان طرقها كلها مرسلة و انه لم يرها مسندة من وجه صحيح و هذا متعصب بما سياتى و كذانبه على ثبوت اصلها شيخ الاسلام الحافظ ابوالفضل العسقلانى فقال اخرج ابن ابى حاتم و الطبرى و ابن المنذر من طرق عن شعبة عن ابى بشر عن سعيد بن جبير قال قرأ رسول الله صلى الله عليه و سلم بمكة والنجم فلما بلغ افرايتم اللاة و العزّى و مناة الثالثة الاخرى القى الشيطان على لسانه تلك الغرانيق العلى وان شفاعتهن لترتجى فقال المشركون ما ذكر الهتنا بخير قبل اليوم فسجدَ و سجدوا فنزلت هذه الآية و ما ارسلنا من قبلك من رسولَ و لا نبى الا اذا تمنى القى الشيطان فى امنية الآية و اخرج البزاز و ابن مردويه من طريق امية بن خالد عن شعبة و قال فى اسناده عن سعيد بن جبير عن ابن عباس فيما احسب ثم ساق الحديث قال البزاز لا يروى متصلا الا بهذا الاسناد تفرد بوصله امية بن خالد و هوثقة مشهور قال و انما يروى هذا من طريق الكلبى عن ابى صالح عن ابن عباس انتهى و الكلبى متروك لا يعتمد عليه و كذا اخرجه النجاشى بسند آخرفيه الواقدى و ذكرها ابن اسحق فى السيرة مطولا و اسندها عن محمد بن كعب و كذلك موسى بن عقبه فى المغازى عن ابن شهاب الزهرى و كذا ابو معشر فى السيرة له عن محمد بن كعب القرظى و محمد بن موسى بن قيس و اورده من طريق الطبرى و اورده ابن ابى حاتم من طريق

اسباط عن السدى ورواه ابن مردويه من طريق عباد بن صهيب عن يحيى بن كثير عن الكلبى عن ابى صالح و عن ابى بكر الهذلى و ايوب عن عكرمة و سليمان التميمى عن من حدثه ثلاثة عن ابن عباس و اوردها الطبرى ايضاً من طريق العوفى عن ابن عباس و معناهم كلهم فى ذلك واحد و كلها سوى طريق سعيد بن جبير اما ضعيف و اما منقطع لكن كثرة الطرق تدل على ان للقصة اصلا مع ان لها طريقين آخرين مرسلين رجالهما على شرط الصحيح احدهما ما اخرجه الطبرى من طريق يونس بن يزيد عن ابن شهاب حدثنى ابوبكر بن عبد الرحمن بن الحارث بن هشام فذكره نحوه و الثانى ما اخرجه ايضا من طريق المعتمر بن سليمان وحماد بن سلمة فرقهما عن داؤد بن ابى هند عن ابى العالية قال الحافظ بن حجر و قد تجرأ ابن العربى كعادته فقال ذكر الطبرى فى ذلك روايات كثيرة لا اصل لها و هو اطلاق مردود عليه وكذا قول القاضى عياض هذا الحديث لم يخرجه اهل الصحة ولا رواه ثقة بسند سليم متصل مع ضعف نَقَلَتِه و اضطراب رواته و انقطاع اسناده وكذا قوله و من حملت عنه هذه القصة من التابعين المفسرين لم يسندها احد منهم ولا رفع الى صاحب و اكثر الطريق عنهم فى ذلك ضعيفة و اهية قال و قد بين البزاز انه لا يعرف من طريق يجوز ذكره الا طريق ابن بشر عن سعيد ابن جبير مع الشك الذى وقع فى اعله و اما الكلبى فلا يجوز الرواية عنه لقوة ضعفه ثم رده من طريق النَّظَر بان ذلك لو وقع لارتد كثير مَن اسلم قال ولم ينقل ذلك انتهى و جَميع ذلك لايتمشى على القواعد فان الطريق اذا كثرت و تباينت مخارجها دل ذلك على ان لها اصلا و قد ذكرنا ان ثلثة اسانيد منها على شرط الصحيح وهى مراسيل يحتجّ بمثلها من يحتج بالمرسل وكذا مَن لا يَحتجّ به لاغضا وبعضها ببعض *

It is likely that it was not the angel Gabriel who reprimanded the prophet, for going so far as he did in his compromise with the idolaters ;

but his followers who were much more sincere in their faith than Mohammad himself. 'Omar disapproved even that any respect should be paid to the black stone of the Ka'bah, "'Omar standing before the black stone said, according to Azraqy (*apud* Burckhardt's Travels to Arabia, p. 308): 'I know that thou art a mere stone that can neither hurt nor help me, nor should I kiss thee had I not seen Mohammad do the same.'" Zamakhshary, Kashshâf to Súrah 17, 75, relates a story, which shows how ready the prophet would have been to compromise himself with the pagans, had he not been prevented by his disciples: The Thaqyfites said to the prophet, We will not submit to thy orders unless thou grantest us certain privileges of which we may boast before other Arabs, viz. that we shall pay no tithes, that we shall not be obliged to go to war for the religion, nor to prostrate ourselves in praying; that usury which we may make on others be our property, but usury which others make on us be void, and that we shall have the idol al-Lát one year longer, and not be obliged to break it with our own hands at the expiration of the year, and that thou shalt defend us against any one who may invade our valley of Wajj, or attempt to cut down our trees, and if the Arabs ask thee, Why hast thou made this agreement? say, God has ordered me to enter into it. They brought him their deed and he dictated: "In the name of the most merciful God, this is the document of agreement between Mohammad the messenger of God, and the Thaqyfites, that they shall not be called upon to pay the tithes, nor to assist in war," when this was written they said 'and not prostate themselves.' The prophet remained silent, and they said to the writer, Write! 'and not prostrate themselves.' The writer looked to the prophet. 'Omar stood up and drew his sword, and said, You have filled the heart of our prophet with contagion, may God fill your hearts with fire! They replied, We are not talking to thee, we are speaking with Mohammad; then the verse of the Qorân 17, 75 was revealed. 'They nearly succeeded in misleading thee from what we have revealed to thee, and in causing thee to invent something else in our name, but at the right moment a friend reprehended thee.'"

روى ان ثقيفا قالت لنبى صلى الله عليه لا ندخل فى امرك
حتى تعطينا خصالاً نفتخر بها على العرب لانعشر ولا نحشر ولا نجبى

فی صلواتنا وکل ربالنا فهولنا وکل ربا علینا فهو موضوع عنا وان تمتعا باللات سنةً ولا نکسرها بایدینا عندراس الحول وان تمنع مَن قصد وادینا وج فعضد شجرنا فاذ اسالتک العرب لم فعلت ذلک فقل ان الله امرنی به وجاوا بکتابهم فکتب بسم الله الرحمن الرحیم هذا کتاب من محمد رسول الله صلی الله علیه وسلم لثقیف لا یعشرون ولا یحشرون فقالوا ولا یحبّون فسکت رسول الله ثم قالوا للکاتب اُکتب ولا یحبیون والکاتب ینظر الی رسول الله صلی الله علیه وسلم فقام عمربن الخطاب فسل سیفه و قال اسعرتم قلب نبیینا یا معشرثقیف اسعر الله قلوبکم ناراً فقالوا لسنا نکلّم ایّاک انّما نکلّم محمد *

The pious Baydhawy who is the author of an abridgement of the Kashshâf, carefully omits the latter part of the story, and instead of the condition that Mohammad should defend the valley of Wajj, (i. e. Táyif,) he says, that he should declare it sacred, in the same manner in which the territory of Makkah was sacred.

The farther back we go in examining the records regarding the character of Mohammad, the stronger they impress us with the conviction, that he was a man of great poetical genius ; but like most exalted men, he was weak and unpractised in action and a barefaced imposter.

I leave it for another opportunity to give a notice of the remainder of this volume of Tabary. Since writing the above I have found a fragment of the first volume of the same author. In looking over some worm-eaten leaves the remnants of a valuable library at Delhi, I saw two sheets, in all 38 pages, written in a very ancient bad hand, and observed the isnád "Ibn Homayd from Salamah, &c." which I know is the isnád of Tabary, and on examination it turned out that the two sheets in question, were a fragment from the first volume of Tabary, and contain part of the history of Abraham. This discovery is in so far important as it gives us the assurance that copies of Tabary are to be found in India.

Note on Patna Boulders. By Captain E. L. Ommanney, *Executive Engr. 3rd Division, Lower Provinces.*

Considerable interest has been excited by the discovery, near Niemanadowah Dák Bungalow, 14 miles from Patna, of a large quantity of round balls or blocks of stone similar to those met with in the beds of mountain torrents, or on the sea coast.

2. At first this circumstance was thought to afford additional proof, if any were wanting, of the former junction of the Soane and Ganges at Patna, as it was supposed that no torrent inferior to the Soane could have brought down pebbles of this size, measuring on an average five inches in diameter; but as the Soane, as far as I have been able to ascertain at present, does not bring down stones of this size, and is about 9 miles distant from the spot, it seems probable that these stones, sand and gravel may come under the denomination of Alluvium or Diluvium, and have been originated locally, that is, been derived from rocks within a few miles of the spot where they are now found.

3. The nearest rocks are the Barábar hills of which the granite peak of Kowä Dól forms a conspicuous object, and are distant about 30 miles south.

4. The slip or train from which they have been excavated is 1400 feet in length by 10 or 12 in breadth. They are imbedded in a kind of bluish clay, resembling marl, at a depth of from 1 to 4 feet.

5. The stones are not all of the same kind, some being more rounded at the edges and oval shaped than others, and of different colors from black to grey and white, but they all appear to be of granite of different qualities of grain.

6. The very coarse-grained stones, seem quickly to decompose on exposure to the air.

7. The stones do not lie at the bottom of a valley, but on rather higher ground than any in the immediate vicinity, some of an oval form lie on their flat sides with the largest diameter nearly east and west; but some lie on edge without regularity, chiefly across the direction of the train, and separated from each other by a small quantity of mud or clay.

8. The sand and gravel is composed of a mixture of particles of various substances, quartz preponderating; the grains are of middling

size, angular and rounded ;—in the mass being of a lightish red color, the bed of sand extends from Mussourie to the Marhar river $4\frac{1}{4}$ miles, and exceeds 20 feet in depth, being on an average about 6 feet below the surface.

9. The stones in the gravel are of different kinds and sizes and are similar to what are now met with a short distance from the mouth of the Soane ; they appear to be of similar quality to the large stones and like the shingle on the sea coast.

10. The sand, a specimen of which is sent, is now being used for covering the surface of the road in the vicinity, to serve as ballast for kankar metalling ; it lies on the surface of the spot whence it is brought ; the same quality of sand is procurable at Teringna : underneath the upper sand at a depth of about 5 feet below the surface and underneath the gravel, is another bed of sand more than 20 feet deep ; the other specimen of sand was dug from a hole close to the road opposite the Dák Bungalow, and seems to be of similar quality. The direction of the bed of sand appears to be from south-west to north-east, which corresponds with the slope of the country from the bank of the Soane to Monghyr.

11. At the spot where the stone was found, water is met with about 4 feet below the stone or 9 feet from the surface.

12. Another circumstance in connection with this stone is deserving of remark ; at No. 1, in the accompanying rough sketch, a nail was dug out from amongst a large quantity of these stones, which were firmly imbedded in clay with a great quantity of broken bricks both above and below them, and this was continued for a distance of 20 feet in length and 2 feet below the surface ; at Nos. 2, 3, 4, are old wells in a patch of scrub jungle, and I understand that there are several more in nearly the same line.

13. This would seem to point out the site of some ancient town or building, and the natives have a tradition of the kind, and it seems almost probable, that it may have been destroyed by some sudden irruption or deluge from the Soane or other mountain torrent in the more immediate vicinity, such as the great and little Pompon or Murhar river.

14. Should such have been really the case the stability of any raised embankment or railroad from Gya to Patna is much to be doubted, if

this tract of country is ever subject to such sudden and extraordinary irruptions as these stones and gravel would seem to indicate.

15. From the rapid way in which the coarser stones decompose, when exposed to the air, there can be no doubt that the whole of the quartz sand found in this neighbourhood arises from the decomposition of these boulders, which may have been rounded by the action of water or may be in their original forms.

16. A sketch of the granite groups in the Barábar hills and of the granite peak, Kowá Dól, 365 feet high, in the same hills is given in Lieut. Sherwill's geological map of Behar.

17. The boulders there shown have evidently been rounded by the wear arising from exposure to the air and the ordiuary drainage of the surface; and no doubt beds of alluvial matter must have been deposited to a considerable depth in their vicinity. These may have been either transported to their present position by a deluge, or may have been gradually carried there, or these stones and gravel may be portions of rocks once similar to the granite groups in the Barábar hills, which have been disintegrated in situ from the action of water or other causes.

18. Maccallock in his geological classification of rocks under the head of Alluvia, says, "In favorable circumstances of position, these disintegrated rocks remain in their places forming beds or masses of loose materials, consisting of larger fragments of the more solid parts mixed with the clay and sand resulting from the more complete decomposition of others. This occurreuce takes place chiefly in granite."

19. The following is a list of specimens to be despatched by steamer.*

Nos. 1, 2, 3. Stones taken from the top of the heap that has been placed along the side of the road for metalling.

No. 4. A broken one from ditto in a state of decomposition.

No. 5. Taken out of the earth on the 7th June 1849, with a portion of the clay in which these stones are found imbedded still adhering to it.

No. 6. A stone taken from the bottom of a heap by road-side.

A few of the small shingle or pebbles which are found imbedded amongst the large stones. A few of the bricks in which the stones

* Sutledge, now daily expected.

were in one place firmly imbedded, also a nail found at the same spot. A bag containing a specimen of the gravelly sand, which is being used for covering the surface of the road.

No. 7. A specimen of sand dug out by the road side opposite the Dák Bungalow.

No. 8. A specimen of sand from Dackinpura west of Meitápura and close to Bánkipura (Patna), where it is conjectured the river Soane once had its bed.

Note on the Strata cut through in excavating for Coal in Wádi Araba, eastern desert of Egypt, by Hekekyan Bey. *Communicated by Captain* T. J. Newbold.

Note.—*Wádi Araba* is one of the transverse vallies that cross the limestone and sandstone formation of the eastern desert of Egypt, and which formed, in ancient times, the principal channels of commerce between the Nile and the Red Sea. It debouches on the *rif* (cultivable portion of the valley of the Nile) near *Deir Biád*, opposite Benisuef, in about Lat. N. 30° 50′, and leads to the interesting monasteries of St. Anthony and St. Paul in the desert. The former is about 18 miles, and the latter about 9 miles distant from the Red Sea. The *Máázi* tribe of Arabs, regards the *Wádi* as belonging to their country, and set a high value on the springs of fresh water with which it and the subordinate *Wádis* abound.

Wádi Araba literally signifies Valley of chariots, and hence has been supposed to have derived its name, from having been the road by which Pharoah with his chariots and horsemen, pursued the children of Israel to the Red Sea. Sir G. Wilkinson ridicules this idea, and asserts that the valley, which is of considerable breadth, has received its name from the *plaustra* or carts, that formerly carried provisions to the two monasteries. This, however, the Arabs in the vicinity denied to me, and the probability is that the name is of far more ancient date, and was given in consequence of its being the road by which stones from the ancient alabaster quarries in the vicinity were conveyed on cars to the Nile. In like manner the road to the Porphyry quarries from the Nile, was termed "*Sikket el Arabiyeh.*"—T. J. N.

Section of Strata in *Wádi Araba.*

An inclined plane open to the sky leads down to the shaft, with steps to the first water drain, the rope of which is provided with two buckets, one at each end, so that one bucket reaches the wooden platform of the stage below, when the other is at the superior stage. A stationary rope serves to prevent the bucket from swinging as it descends with its load; the rope being slightly held with one hand to steady it.

The first stage in order of descent, contains three feet of alluvial matter; three feet of *glauconic* or greenish clay; twenty-four feet of yellowish clay with *gryphæa virgulata* in great quantities; one foot green grit or sandstone; six feet of a yellow ferruginous sandstone;—all of which, except the alluvium, are ascribed to the chalk formation.*

Seventy-five feet of plastic refractory clays, in regular layers of white, grey, blue, and yellow. Each layer is nearly three feet in thickness, the series being repeated in the same order to the entire depth of seventy-five feet. In all these clays are found a few *gryphæa* of different species, and some bivalves.

At the depth of about one hundred and twelve feet the clays cease to appear.

Below them there are, in order, six feet of white, marly, shell limestone, containing several species of the family Echinidæ, and others of old date, three feet of marly, grey limestone—very compact and without shells; two feet of dark brownish clay, very pure. A series of refractory, white, grey and bluish clays reach down to the depth of 140 ft. below the surface, succeeded by fifteen feet of a blackish slaty clay;—all without fossils. Below this are seven feet of slaty clays of greyish hue, intercalated with grey, argillaceous, compact limestone containing two species of ammonites six inches in diameter, and traces of bituminized vegetable substances. One foot quartzose sandstone, compact, white,—with veins of a reddish and greyish colour, and fragments of bituminous plants;—three feet of compact greyish limestones embedding small nodules of galena, and some bivalves *(cardium);*—one foot of psammitic sandstone, quartzose, white, compact;—one foot of the same more compact,—fracture slaty,—colour blackish grey;—one foot

* From the bottom of the chalk formation down to 182 ft. the Bey ascribes the strata to the lias formation, but not with sufficient and satisfactory organic evidence.—T. J. N.

same as above,—with nodules of iron pyrites; and six inches of blackish, compact, grey calcareous stone bring us down to the depth of 169½ ft. from the surface.

A bed of psammitic, quartzose, compact, grey sandstone with slaty fracture, containing small blackish fragments of shells, indeterminable, as if steeped in bitumen, continues down to the depth of 177 ft. Two feet of an argillaceous sandstone, reticulated with veins of lamellary selenite; and three feet of argillaceous schists,—smoke-coloured and dark yellow, bring us down to the depth of 182 ft.

After these we have two feet of a marly, slaty, grey-coloured clay with green spots having metallic lustrous surfaces;—one foot of the same, but of a dark colour without spots, and traversed by a parallel bed of dolomite—ten inches thick, white, compact, and containing some bivalves of very old date and the teeth of the fish—*squallus*;—two feet of an argillo-quartzose psammite of a greyish colour; layers of a black slaty marl—slightly sandy extend down to 190 ft. below the surface. It contains carbonized plants and their impressions in great number, (monocotyledons).

Three feet of quartzose white psammites; two feet of a bronze green clay;—one foot of a green marl with red spots and of a metallic splendour,—and with carbonized monocotyledons, and their impressions;—one foot of greenish yellow psammite also with monocotyledons;—two feet of black bituminous marl, containing many carbonized, monocotyledonous plants;—one foot of white, argillaceous psammite;—one foot of a black slaty clay, containing lignite infiltrated with iron pyrites;—a foot of black slate with impressions of plants, iron pyrites, and traces of carbonate of copper;—an inch layer of grey dolomite with minute, unknown fossil shells;—one foot of black marl with red spots containing nodular iron pyrites;—six inches of whitish grey, and very compact dolomite with veins of crystallized barytes, and here and there, nests of lignite.

One foot psammitic grit,—with small grains of chlorite;—one foot of black slaty clay, with great numbers of small unknown shells;—two feet of black, slaty clay,—two feet of quartzose psammite of a greenish grey colour;—three feet of white, compact, quartzose psammite;—one foot of black clay, with vegetable impressions;—one foot of violet-coloured marl with green spots;—one foot of a greyish dolomitic

limestone;—one foot of marl, with pistachio green spots;—one foot of white psammitic sandstone;—one foot of black clay with impressions, and bituminized plants;—four feet of schistose black clay, with impressions, and large nodules, or cakes, of argillaceous dolomite of a grey colour;—one foot of green psammite with bivalves, belonging to the genus *terebratula (?)*

The foregoing beds carry us down to about 223 ft. below the surface.

To them succeed grey clays with impressions, alternating with layers of a friable dolomite, in which small nodules of galena are perceptible;—one foot of a compact, grey limestone resembling muschelkalk;—two feet of very fine-grained psammite;—three feet of a schistose black clay with impressions of plants which descend down to 236 ft. being divided by pure, fine, greyish tablets of clay.

One foot of black, bituminous slate,—with impressions much carbonized, covers a bed of lignite coal one foot thick, formed of the large stems of Palm, of the genus *Cicas*, of furze, and other plants in confused masses.

The whole of this vegetable matter is impregnated with iron pyrites: under it lies one foot of clay slate similar to that which covers it;—two feet of argillaceous blackish grey slate—containing few impressions, and large nodules of iron pyrites in groups;—two feet of grey, argillaceous psammite.

A sandy, grey, slaty clay, containing large cakes of a yellowish spongy dolomite, in which are seen small globules of galena, and pyritous iron, extend down to 259½ ft., when there is an undulating series of depositions of a very black, splendid, compact, bituminous lignite devoid of pyrites—leaving ashes of a greyish white colour after combustion. Below it is a white, compact psammitic sandstone, in which the shaft terminates.

The total depth of the excavation, calculating from the surface of the alluvium, is 270 feet.

The depth of the inclined plane,	24	Feet.
2nd stage in the shaft,	81	
3rd do. do.,	75	
4th do. do.,	75	
5th do. do. lined with wood-work,	15	
Total depth,	270	feet.

Second excavation in *Wádi Araba.*

The second excavation is at the mouth of the *Wádi Aschar el Bahrièh*, and is 164 ft. deep. The sinking of the pit was commenced at the foot of a range of low sandstone hills, the elevation of which was about 60 ft. above the surface of the *Wádi*. The rate of sinking is about a foot per diem. The strata cut through are as follow:

		Feet.	Inches.
1	Beds of an hydrous plaster (castainite) traversed longitudinally by layers of Sal gemme, each about from 1 to 3 inches thick. It is a pulverulent light sulphate of lime, and of a perfect whiteness.....	3	,,
2	Bed, silicious sandstone—containing masses of white sandstone.....	90	,,
3	Coloured marls *(marnes irisées)*.....	20	,,
4	Variegated red sandstones *(grés rouges big arés)*, with their layers of red ferruginous marls.....	51	,,
	Total feet	164	,,

Examination and analysis of an orange yellow Earth brought from the Sikkim Territory, by Dr. Campbell, Darjeeling, and said to be used there as a cure for Goitre.—By Henry Piddington, *Esq. Curator, Museum Economic Geology.*

This earth is apparently nothing but what is usually termed a common yellow-ochery soil, i. e. a soil in which the iron (generally the colouring principle of soils), is mostly in the state of the hydrated carbonate of the protoxide, as so often found in its earthy and nodular ores. Properly it should be described as an orange-coloured soil.

But as it is said to be used in the cure of the unsightly disease Goitre, though with what success or how administered we are not told, it becomes of interest to know if it contains any thing beyond the usual constituents of the poor yellow ferruginous soils, as also what is the proportion of the hydrated carbonate of iron, which one supposes *a priori* to be the active principle.

For I am not aware that, hitherto, the yellow-ochre which is the purest form of the hydrated carbonate, (the officinal preparation being always

partly in the state of the red peroxide,) has been used in modern medicine. The well known Boles of the old Pharmacopæas seem from the description to be both yellow and red ochres, the last either natural or artificial, and they were probably prepared from the yellow-ochres by calcination.

I find the Sikkim soil to contain in 100 parts

Hygrometric water,	5.00
Water and carbonic acid,	0.75
Iron as peroxide,	19.80
Residuum of Silex and Alumina,	74.45
	100.00

The specimen contained no lime or Magnesia and the Silica and Alumina were certainly not the active ingredients?

I examined, as a comparison, a very pure and bright yellow-ochre from Chota Nagpore in the museum. I find it to contain in 100 parts

Hygrometric water,	2.75
Carbonic acid and water of combination,	6.75
Iron as peroxide,	45.35
Residuum of Silex and Alumina,	45.15
	100.00

The difference then between the two is, that the Sikkim earth contains a very little peroxide, from which the red tinge of its orange colour is derived, and about one half the hydrated carbonate which the yellow-ochre does. Its silica too is partly in small fragments which we can scarcely suppose an advantage. But there is a very remarkable property in the iron of the yellow-ochre, and of our Sikkim soil, which the usual officinal carbonate of the shops does not possess, and this may be the key to its efficiency as a curative agent. It is this—

It was long ago pointed out by Mr. Phillips, in his analysis of the Bath waters, that the Iron, which they are found to contain when a large quantity of the water is evaporated, is not demonstrable by any usual test; not even by the Tincture of Galls; but that when a portion of lime water was added to the Assay the Tincture of Galls would then, and then only, produce the usual purple tinge. He assumes thence that the iron exists in some peculiar state. I have also found this in one of our Indian, or rather an ultra Gangetic, mineral water

near Moulmein,* and I have also detected iron in this peculiar state in a common, but highly efficacious preparation, the decoction of Chiretta, which if administered with regularity with a little of the Elixir of Vitriol added to it, is almost of sovereign efficacy against those enlargements of the spleen, which both in Natives and Europeans so constantly follow or accompany intermittent fevers, especially in children.

Now when a portion of the Sikkim soil is agitated with water, and being allowed to stand for 24 hours is tested by Tincture of Galls, nothing is shewn; but upon adding lime water, the purple or rather greenish black tinge forthwith appears. The same takes place with yellow-ochre, but upon trying it with the officinal carbonate of iron it is not produced. My specimen of this last was not freshly prepared, so that this is not quite a certain result; but it must be also very rarely furnished in the fresh state from the shops. The physicians must now, if yellow-ochre be not too insignificant a remedy, pursue Dr. Campbell's discovery with this commentary, the part of the chemist closing here.

On CALDERITE, *an undescribed Siliceo-Iron-and-Manganese Rock, from the district of Burdwan. By* HENRY PIDDINGTON, *Curator Museum Economic Geology.*

I had found and put by for examination a specimen of this rock, which I at first took to be simply an ore of Iron and Manganese, from one of our old collections; being the series from the Ramghur district, (presented, *I think*, by the Rev. Mr. Everest?) this specimen being from Kut-Kumsandy 12 miles N. W. of Hazarebagh. Dr. McClelland, who had also been struck by its appearance, brought me a specimen from the collections of the Survey. I also found several in the late Mr. William's iron ores, one being a very fine block from Burdwan† in which district it seems not to be uncommon. I shall presently state why I have styled it a rock and not an ore.

* Examination and analysis of a mineral water from the Athan Hills in the Tenasserim Provinces. Gleanings of Science for 1831, Vol. III. p. 25 :—read before the Physical Class, As. Soc.

† Proceedings, Nov. 1848.

Description.

This rock can be in no way so well described as by saying, at once, that while on the weathered surfaces it resembles a common massive ore of iron, its appearance on the fresh fracture is exactly that of black rosin. When examined by the magnifier it is seen to have a golden resinous (which is a yellow quartzy) coating, in thin laminæ, especially on some of the fractures. On others it has small specks which are seen by the magnifier to be minute cavities full of a yellow powder.

The fracture is difficult to describe, being in some places hackly, in others tending to small conchoidal, and in some instances breaking on a large scale into an obliquely rhomboidal cavity, as if the rock would cleave naturally into oblique rhomboidal prisms, or contained crystals of that shape. The most perfect cavity I could measure, for I could not obtain a good solid angle, was one of 124°, giving therefore 56° for the acute angle of the rhomboidal crystal.

The splinters are often nearly laminar and sometimes highly translucent like dark brown rosin. When held to the light, these are seen to contain, here and there, fragments of bright white quartz.

The streak is ash-coloured, and obtained only with the file, or on a salient edge by the knife. It is brittle and easily fractured with a moderate blow. The powder is fawn-coloured.

When breathed upon it gives a metallic odour.

The latter portions are tough and difficult to pulverise, requiring repeated sifting and hard pounding.

Its hardness is 7-8. The specific gravity 3.65.

The solid mineral does not alter by digestion in acids, and even in Nitro Hydrochloric Acid; Hydrochloric Acid dissolves a little iron, but in very small proportion (probably from dust) even from extremely thin pieces.

Before the Blowpipe.

It fuses in thin fragments at the edges into a black, dull, pitchy, slag, which is magnetic, the siliceous part remaining in the slag.

With borax the powder fuses immediately into a dark green glass.

With soda and saltpetre upon platina foil, it gives the usual green mass of manganate of soda.

Via Humida.

From the solution in hydrochloric acid, which acts readily on the pulverised mineral, a strong arsenical odour is evolved, but both from this and from the nitro-hydrochloric solution only traces of arsenic can be obtained, amounting at most to 0.15 or 0.20 per cent. The siliceous residuum is remarkably tenacious, adhering strongly to the bottom of the capsule, unless frequently stirred, and even then leaving a thin coating, only to be removed by caustic Potass, and slightly corroding the glass.

The constituent parts of a fair average of the mineral I find to be—

		Or per centage if of manganese and iron only.
Silex,	46.35	
Alumina,	0.35	
Lime,	1.00	
Arsenic,	0.20	
Perox.-Iron,	30.18	58.64
Protox. Manganese,	21.00	41.36
	99.08	100.00
Loss, partly fluorine, of which there are traces,	.92	
	100.00	

The most compact and apparently homogeneous specimens of this rock are distinctly seen upon closer inspection to be mere aggregates of a black (or very dark greenish black) mineral, and transparent granules and fragments of quartz, in addition to the golden resinous coating mentioned before. Now if the constituent parts of any specimen can be *seen*, the specimen is then clearly a rock and not a mineral; and I have therefore classed this new specimen as a rock without reference to the abundance or scarcity of it. It is evident also that we must set aside all rules of nomenclature to call it a silicate of iron and manganese for the amount of silica will probably differ in every analysis, and we know not if the greenish black part contains any or how much silica in its composition, and that it may be a simple compound of the oxides only.

I have then considered that, as we are certainly entitled to name it, no name can be more justly bestowed upon it than one in honour of a much lamented member of the Asiatic Society of Bengal, the late Mr. James Calder, whose early views of the Geology of India* are still quoted with high and deserved approbation, whose collections and specimens form a valuable part of our Museum and whose constant zeal for, and encouragement to the pursuit of, Mineralogy and Geology, as well as all other branches of science, many will yet remember as well as myself. I have therefore named it CALDERITE.

* Asiatic Researches, Vol. XVIII. p. 1.

PROCEEDINGS

OF THE

ASIATIC SOICETY OF BENGAL

For January, 1850.

At a meeting of the Society held on the 2nd inst.

The Hon'ble the President, in the chair,

The proceedings of the last meeting were read and confirmed.

The following gentlemen, having been duly proposed and seconded at the December meeting, were balloted for and elected members.

J. J. Gray, Esq. Malda.

J. C. Marshman, Esq. Serampore.

Letters were read—

From W. Grey, Esq., Under Secretary to the Government of India, transmitting a letter from Dr. Impey, regarding a Colossal rock image in the Satpoorah range, with report, drawings and inscriptions.

From Dr. Buist, presenting a copy of his work entitled, the Annals of India, for 1848.

From Mr. Mansel, Serampore, inviting the attention of the Society to the preparation of models, &c. for the Grand Exhibition of arts in London, in 1851.

From Mr. Hodgson, Darjiling, on the Aborigines of the Eastern Frontier.

From Major Wyllie, Officiating Secretary to Government of India, Military Department, transmitting a copy (in two vols.) of Colonel Everest's measurement of the meridional arc of India, received from the Hon'ble the Court of Directors.

From Messrs. R. and J. E. Taylor, London, forwarding a table of meteorological observations inserted at p. 33 of the Transactions of Sections, in the 18th Report of the British Association.

From Captain Champneys, intimating his desire to withdraw from the Society.

From Dr. Campbell, Darjiling, dated Laehong, Oct. 24th, presenting 3 skins of the Kiang or wild Ass of Thibet.

From John Russell Bartlett, Esq., Corresponding Secretary of the American Ethnological Society, dated New York, 15th May, 1849, transmitting, for acceptance of the Society, a copy of the Transactions of the Ethnological Society, (1st and 2nd vols.) and expressing a desire for an exchange of publications.

From Captain Hutton, forwarding some remarks on the snow line of the Himalaya, in reply to Lieut. Strachey.

The annual accounts were submitted and referred to the Finance Committee about to be elected.

The President read the following Report by the Council of the Society, on the state of its affairs at the close of the year 1849.

Report.

The Council regret to state that under the circumstances in which they are placed, they cannot lay before the Society that detailed Report which has usually been presented, and which the Society has a right to expect will be presented, at its annual meeting.

The Senior Secretary Dr. O'Shaughnessy has, during the greater part of the present year, been compelled by the state of his health to absent himself from the Presidency, the same cause also for several months deprived the Society of the services of the Co-Secretary Mr. Laidlay. During the absence of Mr. Laidlay Dr. Walker and Dr. McClelland were kind enough to discharge temporarily the duties of the Secretaries including the editorship of the Journal.

The financial state of the Society was brought to its notice and certain reductions recommended by the Council, in a Report made at the general meeting of the 1st of August, 1849. Some of the recommendations of the Council were adopted and others rejected by a general meeting of the Society held on the 5th of September, 1849.

The Council would have again submitted a more formal statement of the Society's finances, had it not been prevented by the circumstances into which it is now necessary to enter, from drawing up and presenting an annual Report in the ordinary form.

Mr. Laidlay, about the time at which he would naturally have prepared such a Report, was obliged suddenly on pressing private business, to go into the Mofussil, where he has since been detained. The Senior Secretary, owing to his absence from Calcutta and his imperfect acquaintance with the affairs of the Society during many months of the past year, the pressure of public duties, and other causes, has found himself unable to supply the place of his Co-Secretary and to draft such a Report.

The Council have further, and to their great regret, to inform the Society that Dr. O'Shaughnessy finds it impossible to continue to the Society those services from which it has for several years derived so much benefit. The Council has too much reason to apprehend that the Society may also lose the valuable services of Mr. Laidlay, who, as well as Dr. O'Shaughnessy, with every desire for the welfare of the Society, finds that the management of its affairs demands far more time and attention than he has to devote to them.

The Council would, under any circumstances, have considered the retirement of either gentleman, a matter to be regretted by the Society. It is doubly so when the Council is unable to point to any gentleman who is willing, as well as able, to succeed to the onerous office about to be relinquished.

The Council is decidedly of opinion that unless a considerable modification of the duties of the Secretaries takes place—unless their labours be materially lightened, it is unreasonable to expect that any gentleman will undertake an office which, as at present constituted, is both laborious and purely gratuitous, or recompensed only by occasional and considerable annoyances. The editorship of the Journal alone involves an amount of care and attention, which few men engaged in the active business of life can bestow.

The most obvious mode of lightening the labours of the Principal and Honorary Secretaries is by the agency of a paid officer or Under-Secretary, who would save them from mere duties of routine.

Unfortunately the state of the Society's finances renders it impossible to adopt such a measure, except upon the most mature consideration, and with some modification of the existing establishment.

Another measure which deserves immediate attention is the revisal of the rules of the Society. At the annual meeting of January, 1848,

Dr. Walker, with reference to the rules of the Society, read the following proposals:—

1st. "That no alteration in the rules, nor any extraordinary expense beyond (say) 500 Rupees, be sanctioned, except at the annual meeting of the Society; and that before any such questions are finally decided, the Mofussil members, as well as those residing in Calcutta, be called to vote on the same.

"Before this propositiou be carried into effect, it is desirable that the rules of the Society should be made as perfect and complete as possible, and that during the interval between each annual meeting, the functions of the Society be solely administrative, it is therefore proposed:—

2nd. "That the Council of the Society be appointed to revise the rules, and that these be carefully compared with the rules of similar institutions in Europe, and that copies of the latter, if they are not already in the library, be immediately sent for overland." H. W.

"After a short discussion, Dr. Walker's proposition, supported by Dr. O'Shaughnessy, was referred for consideration to the Council, who were requested to act upon the 2d para. thereof, at their earliest convenience."

The Council, in the Annual Report for the year 1848, mentioned that they had caused letters to be written to Europe requesting to have copies of the rules of other learned and scientific Societies, but that the answers to those letters had not been received.

No answers to those letters have now been received, but the Council believe that there exist in Calcutta, including the excellent rules which have lately been framed and submitted to the Agricultural Society for its adoption, ample materials for the revisal of this Society's rules—and that the revision of them should no longer be delayed.

The Council however have not thought fit to take up this subject at present, because they could not have completed the task before the period which has now arrived, of the annual election of officers, when they themselves are functione officii.

The Council cannot disguise from themselves that the preseut state of the Society is most unsatisfactory, especially in regard to the most important of the Society's officers, that of Secretary—and to the absence of a detailed report on the Society's affairs.

They are happy to state, however, that if no fit successors can now be found, Dr. O'Shaughnessy (and they believe Mr. Laidlay also) is willing, if re-elected, to discharge the current duties of Secretary temporarily and until a new arrangement can be made. Upon Mr. Laidlay's return moreover the deficiencies in the present report may be supplied, and an extraordinary report may be made.

The following are the resolutions which, in this difficult conjuncture, the Council would recommend for the adoption of the Society.

1st. That the Council now to be elected, be requested to proceed without delay to revise the rules of the Society, and that it do also take into its immediate consideration the state of the Society and report thereon.

2ndly. That the rules when revised be printed and circulated amongst the members, including those resident in the Mofussil, and that the Mofussil members be requested to vote on the question of the adoption or rejection of such rules, sending their votes in writing to the Secretary.

3rdly. That the rules be discussed at a special general meeting, and the votes of the members, including those of the Mofussil members, ascertained as above, be taken thereon.

The Council cannot suppose that any doubt can exist of the propriety of allowing the Mofussil members an opportunity of expressing their opinions upon questions so materially affecting the Society and its organisation.

4thly. That in addition to the ordinary officers, the Society do elect a Finance Committee of three persons, pursuant to the recommendation to that effect contained in the report of the 1st of August, 1849.

The above report was unanimously adopted.

The meeting then proceeded to elect office-bearers for the ensuing year.

Lt.-Col. Forbes having signified his desire to be permitted to retire from the list of Vice-Presidents,

It was proposed by Mr. J. R. Colvin and seconded by Capt. Broome, that as a testimony of the great respect of the Society, Col. Forbes be at the next meeting elected an Honorary Vice-President of the Society, as was done on the retirement of Mr. Torrens.

The election of officers then took place when the following gentlemen were chosen :—

President.

Honorable Sir James W. Colvile, Kt.

Vice-Presidents.

The Rt. Rev. Daniel Wilson, *Bishop of Calcutta.*
J. W. Laidlay, Esq.
W. B. O'Shaughnessy, Esq. M. D.
Welby Jackson, Esq.

Council.

Capt. A. Broome.
Babu Ramgopal Ghose.
Dr. H. Walker.
Dr. J. McClelland.
S. G. T. Heatly, Esq.
W. Seton Karr, Esq.
J. R. Colvin, Esq.
C. Beadon, Esq.
R. W. G. Frith, Esq.

Secretaries.

Dr. W. B. O'Shaughnessy.
J. W. Laidlay, Esq.
Dr. E. Roer, *Secretary in the Oriental Department.*

Sections.

Oriental Section.

W. Seton Karr, Esq.
W. Jackson, Esq.
Babu Harimohan Sen.
Babu Rajendralal Mittra.
Rev. J. Long.
Dr. Roer, *Secretary.*

Natural History.

J. W. Grant, Esq.
Dr. H. Walker.
R. W. G. Frith, Esq.
Dr. McClelland.
Dr. Macrae.
J. W. Laidlay, Esq. *Secretary.*

Statistical.

Rev. J. Long.
Lieut. N. A. Staples.
Dr. Duncan Stewart.
C. Beadon, Esq.

Geology and Mineralogy.

Capt. Broome. | Jas. Dodd, Esq. | A. Mitchell, Esq.

Physics and Meteorology.

J. W. Grant, Esq. | Lieut.-Col. W. N. Forbes.
Capt. W. H. L. Thuillier. | Venerable J. H. Pratt.
J. Newmarch, Esq.

Finance Committee.

C. Beadon, Esq. | S. G. T. Heatly, Esq. | J. R. Colvin, Esq.

The Curator of the Museum of Economic Geology submitted an apology for non-attendance on the grounds of indisposition.

The Librarian having handed in his usual monthly report, the meeting adjourned.

Confirmed, J. W. Colvile.

Library.

The following books have been received since the last meeting.

Presented.

Icones Plantarum Asiaticarum, Part II.: On the higher Cryptogamous Plants. By the late W. Griffith, Esq. Calcutta, 1849, 4to., 2 copies.—Presented by the Government of Bengal.

Notulæ ad Plantas Asiaticas, Part II.: On the higher Cryptogamous Plants. By the late W. Griffith, Esq. Calcutta, 1849, 8vo., 2 copies.—By the Same.

Itinerary Notes of Plants collected in the Khasyah and Butan mountains, 1837-38, in Affghanistan and neighbouring countries, 1839 @ 1841. By the late W. Griffith, Esq. Calcutta, 1849, 8vo., 2 copies.—By the Same.

Annals of India for the year 1848. An outline of the principal events which have occurred in the British dominions in India from 1st January, 1848, to the end of the second Sikh War in March, 1849. By G. Buist, L. L. D. Bombay, 1849, 8vo.—By the Author.

The English and Native Calendars for 1850. Bombay, 1850.—By the Editor.

Meteorological Register kept at the Surveyor General's Office, Calcutta, for the month of November, 1849.—By the Deputy Surveyor General.

Tattvabodhiní Patriká, No. 76.—By the Tattvabodhini' Sabha'.

The Oriental Christian Spectator, Nos. 11, 12.—By the Editors.

Journal of the Indian Archipelago for Oct. 1849.—By the Editor.

Two copies of the same.—By the Government of Bengal.

Calcutta Christian Observer, No. 212.—By the Editors.
Oriental Baptist, No. 37.—By the Editor.
Upadeshaka, No. 37.—By the Editor.

Exchanged.

The Athenæum, Nos. 1143-46.

Purchased.

Comptes Rendus, Nos. 7-14.
Journal des Savans for August and September, 1849.
The Annals and Magazine of Natural History for Oct. 1849.
The Edinburgh Review, No. 189.

Report of the Curator, Museum of Economic Geology for the month of January.

Economic Geology.

I have taken advantage in the course of my correspondence on storm matters with H. E. the late Naval Commander-in-chief, to request the favour of specimens of coal and coal strata from Laboan, and of any other specimens which could be obtained for the Museum; and we have now received from Captain Wallage of H. C. Steamer Nemesis, the following note with a box of specimens and the sketch therein alluded to.

Dear Sir,—A short time ago I received an order to make a collection of strata, &c. from Laboan for the Museum of Economic Geology of India.

I have now the pleasure of sending per Brig "Poppy" some specimens from the north end of Laboan and adjacent islands, and a sketch of the section of the same.

Your's very truly,
(Signed)—Wallage, *Commr.*
H. C. Steamer Nemesis.

Sincapore, July 9th, 1849.

The coal from Laboan I have analysed; it is of a very fine description, and in fact equal to the average of English coal, as given in Mr. Prinsep's table; Journal A. S., Vol. VII. p. 199.

		English Coal.
Its Sp. Gravity is, ...	1.27	1.296
Its constituent parts are	——	——
Gaseous and Volatile matter, ...	36.50	31.00
Carbon, ...	61.35	67.30
Ash, ...	2.15	2.8
	100.00	100.38

We received from Captain Phayre, some time back, three specimens of ores from Moulmein which having laid by I forgot, but have now examined. They are two of common galena and one of specular iron ; but none of them of any value, nor do they contain any trace of silver.

From H. Torrens, Esq. C. S. Agent G. G. at Moorshedabad, we have received a specimen of the iron manufactured by the Sontals of Birbhoom, with a valuable note on it well worthy of insertion in the Journal.

Mr. Humfray has obliged us by allowing me to select from a large heap of the ball coal of Burdwan at his yard such specimens as I pleased, and he has also presented several highly curious ones selected by himself. Mr. Theobold, Junior has also sent us a good basket full of specimens so that we are now enabled to pronounce with certainty that this curious variety really is, as I suspected in my second notice, coal which has been softened by heat under pressure and has, like trap and other rocks under similar conditions, assumed a pseudo-columnar, and at times a globular, form in cooling.

We have now by Mr. Homfray's and Mr. Theobold's liberality a whole case of highly valuable and interesting specimens. I have put into a separate paper for the Journal my detailed examination of this coal.

Geological and Mineralogical.

Captain W. S. Sherwill has brought us from the Cape a complete set of specimens of the Table mountain with several ores and other miscellaneous specimens, many of which will be useful in completing series or filling up blanks.

Messrs. J. H. Duncan and W. H. M. Sweetland have presented a miscellaneous collection of specimens procured during a Geological survey of the Kurruckpore and Rajmahal hills, many of which I anticipate will be of interest.

Dr. *Abstract Statement of Receipts and*

RECEIPTS.

To Museum.

Received from the General Treasury the amount of allowance authorized by the Court of Directors for the services of a Curator from December 1848 to November 1849, at 250 Rs. per mensem, .. Rs.	3,000	0	0			
Ditto ditto for the preparation of Specimens of Natural History from ditto to ditto, at 50 Rs. ditto,..	600	0	0			
Ditto back amount of Gulu and Hari Ferashes' salaries, their services not having been entertained, ..	32	13	3			
				3,632	13	3

To Museum of Economic Geology.

Received from the General Treasury the amount of allowance authorized by Government for the services of a Joint Curator from December 1848 to November 1849, at 250 Rs. per mensem, ...	3,000	0	0			
Ditto ditto for Establishment and contingencies, at 64 Rs. per mensem, ...	768	0	0			
Received fines from Punka boy's and Peon's salaries,	0	8	3			
				3,768	8	3

Carried over,.. 7,401 5 6

Disbursements of the Asiatic Society for the year 1849. Cr.

DISBURSEMENTS.

By Museum.

Paid Mr. E. Blyth's Salary as Curator from December 1848 to November 1849, being 12 months, at 250 Rs. per mensem, ... Rs.	3,000	0	0					
Ditto ditto house-rent from ditto to ditto being 12 months, at 40 Rs. per mensem, ...	480	0	0					
				3,480	0	0		
Ditto Establishment of Taxidermists, Artists, Carpenters, &c. from December 1848 to February 1849, at 147 Rs. per ditto, ...	441	0	0					
Ditto ditto for March and April, at 137 Rs. ditto, ...	274	0	0					
Ditto ditto from May to September, at 124 Rs. ditto, ...	620	0	0					
Ditto ditto for October and November, at 82 Rs. ditto, ...	164	0	0					
				1,499	0	0		
Ditto for Contingencies incurred for the preparation of Specimens of Natural History, ...				436	1	0		
Ditto Tarachund Doss for 4 mats for the Bird room,..				54	2	0		
Ditto postage for a parcel containing Shells received from Europe,..				5	0	0		
Ditto for Casks and cooly hire for spirits of wine, ..				3	14	0		
Ditto Bissonauth Mistry for supplying 100 Teak-wood tickets for the shells, ...				3	0	0		
Ditto Auhin China-Carpenter for making 4 Glass Cases, ...	335	0	0					
Ditto Issore Chunder Carpenter for 3 ditto, ...	150	0	0					
				485	0	0		
Ditto charges for landing 3 cases containing Specimens of Natural History,..				1	5	0		
Ditto Messrs. W. Thacker and Co. for 19 sheets of tinted paper, ...				7	2	0		
							5,974	8 0

By Museum of Economic Geology.

Paid Mr. H. Piddington's Salary as Joint-Curator from December 1848 to November 1849, being 12 months, at 250 Rs. per mensem, ...				3,000	0	0		
Ditto Establishment from Dec. 1848 to Sept. 1849, being 10 months, at 31 Rs. per mensem, ...	310	0	0					
Ditto ditio for Oct. and Nov. ..	67	14	0					
				377	14	0		
Ditto for Contingencies, ...				109	3	3		
Ditto Messrs. Scott and Co. for a copy of Bengal Directory for the year 1849,..				8	0	0		
Carried over,..				3,495	1	3	5,974	8 0

Brought forward, Co.'s Rs.				7,401	5 6
To Oriental Publication Fund.					
Received from the General Treasury the amount of Government grant, towards the publication of Oriental Works from December 1848 to June 1849, being 7 months, at 500 Rs. per mensem, ..	*3,500	0	0		
Received from the separate account of the O. P. Fund, being the amount in full of the balance due to the General Funds of the Society, ...	119	8	9		
				3,619	8 9
Carried over,..				11,020	14 3

* See N. B. in next page.

Brought forward, Co.'s Rs.	3,495	1	3	5,974	8	0
Paid Curreem Duftery for pasting a Map of Behar with cloth, ...	13	0	0			
Ditto for 1 dozen Stoppered bottles, ...	3	0	0			
Ditto for Toon-wood Writing Table, ...	32	0	0			
Ditto for 1 ounce of Caustic Soda in a stone vial, ..	9	0	0			
Ditto for a Platina Capsule,..	12	0	0			
Ditto for a Woollaston's reflecting Gnomiometer, ..	50	0	0			
Ditto for a Copy of Memoir of the Museum of Economic Geology of London, ...	12	8	0			
Ditto for 2 Vols. of Hellot des Mines, ...	12	0	0			
				3,638	9	3
By Museum of Mineralogy and Geology.						
Paid Mr. H. Piddington Curator, for Sundry Contingencies, ...	109	14	9			
				109	14	9
By Oriental Publication Fund.						
Paid Dr. E. Roer's salary as Editor of the Oriental Journal from December 1848 to June 1849, being 7 months, at 100 Rs. per mensem,*	700	0	0			
Ditto Establishment from ditto to ditto,.. ..	326	0	0			
Ditto Contingencies ditto ditto, ...	50	9	9			
Ditto for a remittance to Dr. Ballentyne, for copying the Yajur Veda, ...	50	0	0			
Ditto Rev. J. Thomas, on account Baptist Mission Press, for printing and paper for 500 copies of the Bibliotheca Indica, No. 9 to 12 or from September to December 1848, ...	888	0	0			
Ditto freight, packing charges, &c.	18	1	0			
Paid Establishment for the custody of Oriental Works from December 1848 to June 1849, being 7 months, at 72 Rs. per mensem, ...	504	0	0			
Ditto Contingencies for ditto, ...	9	10	6			
Ditto Jas. Corcoran, Esq. for 20 copies of his account Geographical, Historical and Statistical of the Chinese Empire, in the Urdu language, at 8 Rs. each,	160	0	0			
Ditto Messrs. Lattey, Brothers and Co. for a MS. copy of History of Sooltan Aboo Syad, ..	33	0	0			
Ditto Mudan Mohun Turkalankar for Sundry Sanskrit books, ...	27	8	0			
Ditto Duftery for binding books, ...	29	0	0			
Ditto into the Bank of Bengal on separate Account of the Oriental Publication Fund, ...	2,200	0	0			
				4,995	13	3
Paid Rev. J. Thomas, on account Baptist Mission Press for printing and paper for 500 copies of the Bibliotheca Indica, No. 5 to 8, ...	870	8	0			
				*870	8	0
Carried over,..				15,589	5	3

* This amount has been debited in the separate Account of Oriental Publication Fund on the 30th December 1848.

N. B. The Receipts and Disbursements on account of the Oriental Fund subsequent to the 30th June 1849, are not included in the General Account, separate accounts being kept for the same,

				Brought forward, Co.'s Rs.	11,020 14 3
To Library.					
Received by sale of Miscellaneous Books,			..	22 11 3	
					22 11 3

To Sale of Oriental Publications.					
Received by sale of Oriental Works sold at the Library, and Subscriptions to the "Bibliotheca Indica,"				994 8 0	
Received proceeds of Oriental Works sold at Benares,				293 0 0	
					1,287 8 0
				Carried over,..	12,331 1 6

				Brought forward, Co.'s Rs.			15,589	5 3
By Library.								
Paid Babu Rajendra Lal Mittra's salary as Assistant Secretary and Librarian, from December 1848 to September 1849, being 10 months at 100 Rs. per mensem, ...	1000	0	0					
Ditto—Ditto—for October and November 1849, at *70 Rs. per mensem,..	140	0	0					
				1,140	0	0		
Ditto Establishment from December 1848 to September 1849, being 10 months at Rs. 58-8-0 per mensem,..	585	0	0					
Ditto—Ditto—for October and November 1849, at Rs. 37-8-0—ditto, ..	75	0	0					
				660	0	0		
Ditto contingencies from December 1848 to November 1849, ...				62	4	0		
Ditto Messrs. R. C. Lepage and Co. for purchase of books, ..	333	8	0					
Ditto—Ditto—for landing charges for books, parcels, &c., ...	5	6	0					
				338	14	0		
Ditto Messrs. W. Thacker and Co. for purchase of books, ...				124	8	0		
Ditto Busseerudee Bookseller for ditto, ..				13	12	0		
Ditto for sundry books purchased for the purpose of presenting to Mr. Konig, as per Librarian's Account,				195	0	0		
Paid Messrs. Stewart, Ford and Co. per order of Messrs. Smith, Elder and Co. London, for 3 copies of parts 7 to 9, Falconer and Cautley's, Fauna Antiqua Sivalensis subscribed for by the Society £10-10, Ex. at 1s. 9½d. per Rupee, ...	117	3	0					
Ditto landing charges, ...	2	0	0					
				119	3	0		
Ditto Duftery for binding books, ...				206	10	0		
Ditto Mr. G. T. Lackersteen for 6 wrought iron suspenders with screws, &c., ...	18	12	3					
Ditto Bissonauth Mistry for ditto and Teak-wood planks, ...	46	8	0					
				65	4	3		
Ditto Ramchand Mistry for a Teak-wood Book-shelf,				25	0	0		
Ditto freight and shipping charges for Sundry books presented to the Geographical Society of Bombay,..				8	5	6		
							2,958	12 9
By Sale of Oriental Publications.								
Paid Mr. R. Stopford Agent G. S. N. Co. freight for despatching Oriental Works for sale to Captain Kittoe, Benares, ...				3	0	0		
							3	0 0
				Carried over,..			18,551	2 0

* The Librarian is allowed 30 Rs. per mensem from the Oriental Fund in addition to the 70 Rs. paid from the General Funds of the Society, agreeably to the resolutions of a General Meeting held on the 5th September 1849.

					Brought forward, Co.'s Rs.	12,331	1 6
To Journal.							
Received by sale of the Society's Journal, ..			113	0 0			
Ditto by transfer from the separate account of Subscription, to the Journal, ...			1,395	0 0			
						1,508	0 0
To Secretary's Office.							
Received from Buckawoolla Peon, 2nd and 3rd instalment in part payment of Rs. 10 advanced him on account of his salary, ...			2	0 0			
						2	0 0
To Miscellaneous.							
Received from B. H. Hodgson, Esq. amount of expenses incurred in printing his Essay on Kooch, Bodo, and Dhimal Tribes,..			650	0 0			
Ditto from the Librarian, proceeds of old durma mats and packing chests sold at the Library, ..			1	8 0			
						651	8 0
					Carried over,..	14,492	9 6

				Brought forward, Co.'s Rs.		18,551	2 0
By Asiatic Researches.							
Paid Mr. W. H. Haycock, Superintendent Bishop's College Press, for printing 500 copies of a portion of the Asiatic Researches and in full of all demands,..				288 0 0			
						288	0 0
By Journal.							
Paid Rev. J. Thomas, on account Baptist Mission Press for printing the Society's Journal from May to September 1848, ...				1,733 0 0			
Ditto Mr. T. Black, Proprietor of the Asiatic Lithographic Press for lithographing plates, &c. ..				599 9 3			
Ditto Mr. J. D'Cruz, for the Proprietors of the Calcutta Lithographic Press for lithographing maps, &c.				192 8 0			
Ditto Mr. H. M. Smith for drawing a map of Nepaul and Bootan on transfer paper, ...				25 0 0			
Ditto Mudoosoodun Doss, Draftsman his salary from 16th March to 30th November 1849, at 15 Rs. per mensem, ...	127 12 0						
Less amount fined, ...	3 0 0						
				124 12 0			
Ditto salaries of Extra Draftsmen, ...				10 5 4			
Ditto freight for Journals forwarded to Messrs. W. H. Allen and Co. London, per P. and O. S. N. Co.'s Steamers, ...				157 8 0			
Ditto contingencies and postages, ...				79 11 0			
						2,922	5 7
By Secretary's Office.							
Paid Mr. F. Greenway's salary as Officiating Accountant from December 1848 to July 1849, at 60 Rs. per mensem, ...				480 0 0			
Ditto Establishment from Ditto to Ditto,	383 2 5						
Ditto—Ditto from September to November 1849, at 42 Rs. per mensem,	126 0 0						
				509 2 5			
Ditto Salaries of extra Peons and Sirkars for collecting bills, ...				25 12 11			
Ditto for Stationary, ...				21 13 0			
Ditto for Account books, ...				19 13 6			
Ditto for printing Circular letters, &c.				9 8 0			
Ditto for contingencies and postages, ...				84 10 3			
						1,150	12 1
By Miscellaneous.							
Paid Mr. F. Halligan's salary as Night Guard from December 1848 to November 1849, at 40 Rs. per mensem, ...				480 0 0			
Ditto Messrs. Tarrachand Doss and Co. for three 6-light bronzed ring Lustres, at 35 Rs. each, ..				105 0 0			
Ditto Messrs. Modoosoodun Doss and Co. for 1½ dozens of oil burners, at 5 Rs. per dozen, ..				7 8 0			
Ditto Messrs. Thompson and Co. for repairing the bottom of hanging Lustres, ...				5 0 0			
Ditto for advertising meeting of the Society in the Newspapers, ...				119 3 0			
Ditto for Sundry contingent expenses for the meeting and oil for Night Guard, ...				109 4 0			
			Carried over,..	825 15 0		22,912	4 8

Brought forward, Co.'s Rs.								14,492	9	6
To Contributions and Admission Fees.										
Received from Members, amount of quarterly contributions, from January to December, 1849, ...			8,136	0	10					
Ditto ditto in advance, ...			681	14	6					
Ditto ditto by transfer, ...			144	0	0					
						8,961	15	4		
Ditto ditto admission fees, ...						448	0	0		
									9,409	15	4
To Donations.										
Received from J. W. Laidlay, Esq. donation for the use of the Zoological Department, ...						500	0	0		
									500	0	0
To Capt. M. Kittoe.										
Received from him, amount paid on his account as per contra, ...						9	6	3		
									9	6	3
To Hon'ble Sir J. W. Colvile.										
Received from him as loan, ...						700	0	0		
									700	0	0
Carried over,..									25,111	15	1

	Brought forward, Co.'s Rs.			825	15	0	22,912	3	8
Paid Ferash's salary for the Reading Room, ..				30	0	0			
Ditto for a patent Letter-safe, ...				40	0	0			
Ditto Mr. J. Chaunce for winding up and keeping the clock in order from May 1848 to April 1849, ..				25	0	0			
Ditto for Sundry expenses incurred for erecting pedestals for Statues and Sculptures, ...				75	1	3			
Ditto Mr. J. Sinclair, Accountant Oriental Bank for a set of Bills of Exchange for £21 in favor of W. Neal, Esq. Collector of Oriental Translation Fund, London, and remitted to him on account of Subscriptions for the years 1847 and 1848, Exchange at 1-9⅛ per Rupee				238	9	3			
Ditto for printing blank receipts and bills, ...	39	14	3						
Ditto Mr. T. Black for printing from a steel engraving 100 copies of an emblematic Vignette of the Museum, ..	6	0	0						
				45	14	3			
Ditto for Sundry contingent expenses, ...				10	4	0			
							1,290	11	9
By Buildings.									
Paid Mr. J. M. Voss, Architect, for repairing the Society's premises, in part of the balance of his account, Rs. 1348-10-3, ...				1,000	0	0			
Ditto for Sundry alterations and petty repairs done to the Society's premises, ...				96	11	9			
							1,096	11	9
By Batavian Society of Arts and Sciences.									
Paid for the following books purchased on account of the above Society.									
A set of Calcutta Christian Observer, ..				33	12	0			
A do. of Calcutta Journal of Natural History, ..				40	0	0			
Freight, ...				8	0	0			
Packing, Chest, &c., ...				0	13	9			
Shipping charges, ...				0	8	0			
							83	1	9
By Captain M. Kittoe.									
Paid for advertising in the Newspapers "Wanted a clever Draftsman,"				9	6	3			
							9	6	3
By B. H. Hodgson, Esq.									
Paid Salaries of extra Dufterys for fixing correction labels on "Mr. Hodgson's Aborigines in India," ..				33	12	0			
							33	12	0
By H. Torrens, Esq.									
Paid him (by transfer) in part payment of Rs. 998, due to him by the Society on the 31st December 1848, ...				64	0	0			
							64	0	0
By J. Muir, Esq.									
Paid him (by transfer) in part payment of Rs. 332, due to him by the Society, ...				64	0	0			
							64	0	0
						Carried over,..	25,553	15	2

Brought forward, Co.'s Rs.	25,111	15	1
To Balance.			
As per Account closed on the 31st of December, 1848, ..	1,072	14	8
Company's Rupees,.. ..	26,184	13	9

Calcutta, Asiatic Society's Rooms, the 31st December, 1849.

					Brought forward, Co.'s Rs.		25,553	15 2
By J. W. Laidlay, Esq.								
Paid him (by transfer) in part payment of Rs. 475-7-4, due to him by the Society, ...					16	0 0		
							16	0 0
By Balance.								
In the Bank of Bengal, ...			527	13 5				
Cash in hand, ...			14	0 2				
					541	13 7		
By Inefficient Balance.								
For balance of the amount advanced to Mr. Templeton for contingencies in the Museum of Zoology Department for May and June 1849, ..			7	1 0				
For amount advanced Mr. Blyth, for ditto ditto, for November 1849, ..			50	0 0				
For amount advanced Baboo Rajendralal Mittra for contingencies in the Library for December 1849, ..			16	0 0				
					73	1 0		
							614	14 7
					Company's Rupees,		26,184	13 9

Errors and Omissions Excepted,
Seebchunder Nundy.

Dr. *The Oriental Publication Fund in*

January 1st, 1849.—To Cash paid Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for the month of Dec. 1848, Rs.	100	0	0							
Ditto ditto ditto Establishment for ditto,	46	2	9							
				146	2	9				
Ditto 9th ditto, Librarian for sundry Contingencies in the Library Oriental Department for the month of Nov...	1	13	0							
Ditto ditto ditto for Dec..	2	5	0							
Ditto ditto Freight on a parcel of Oriental Works despatched to Capt. Kittoe, Benares, ...	1	0	0							
Ditto ditto ditto ditto, ...	1	8	0							
Ditto 16th ditto, Establishment for the custody of Oriental Works for December, 1848, ...	72	0	0							
				78	10	0				
							224	12	9	
February 3rd, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for January, 1849,	100	0	0							
Ditto ditto ditto Establishment for ditto,	40	0	0							
Ditto ditto ditto Contingencies for ditto,	7	3	6							
				147	3	6				
Ditto 17th, ditto, Establishment for the custody of Oriental Works for January, 1849, ...				72	0	0				
							219	3	6	
March 6th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for Feb. 1849, ..	100	0	0							
Ditto ditto Establishment for ditto, ..	40	0	0							
Ditto ditto Contingencies for ditto, ..	7	9	6							
				147	9	6				
Ditto 21st, ditto, Establishment for the custody of Oriental Works for Feb. 1849, ...	72	0	0							
Ditto 29th, ditto, Librarian for sundry Contingencies in the Library Oriental Department for Feb. 1849, ..	1	14	0							
Ditto ditto Government Steam Boat Office, freight on a case forwarded to Capt. Kittoe, Benares, ...	12	3	0							
				86	1	0				
							233	10	6	
April 7th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for March, 1849, ..	100	0	0							
Ditto ditto ditto Establishment for ditto,	40	0	0							
Ditto ditto ditto Contingencies for ditto,	7	1	0							
				147	1	0				
Ditto 14th, ditto, Establishment for the custody of Oriental Works for the month of March, 1849, ..				72	0	0				
							219	1	0	
				Carried over,			896	11	9	

Account Current with the Asiatic Society. Cr.

January 1st, 1849.—By Balance of Account closed and published down to the 31st Dec. 1848.									
Company's Papers of the new 5 per cent. Loan deposited with the Government Agent, ...	4,000	0	0						
Cash, ...	1,376	4	6						
				5,376	4	6			
							5,376	4	6
Ditto 22nd, By Cash received from the General Treasury the amount of monthly grant sanctioned by the Hon'ble Court of Directors for the month of Dec. 1848, ...				500	0	0			
							500	0	0
February 20th, ditto, ditto for January, 1849, ..				500	0	0			
							500	0	0
March 20th, ditto, ditto for February, 1849, ..				500	0	0			
							500	0	0
April 18th, ditto, ditto for March, 1849,.. ..				500	0	0			
							500	0	0
May 19th, ditto, ditto for April, 1849, ...				500	0	0			
							500	0	0
July 20th, ditto, ditto for May, 1849, ...				500	0	0			
Ditto 21st, ditto, ditto for June, 1849, ...				500	0	0			
							1,000	0	0
August 15th, ditto, ditto for July, 1849,.. ..				500	0	0			
							500	0	0
September 17th, ditto, ditto for August, 1849, ..				500	0	0			
							500	0	0
October 20th, ditto, ditto for September, 1849, ..				500	0	0			
							500	0	0
November 19th, ditto, ditto for October, 1849, ..				500	0	0			
							500	0	0
December 22nd, ditto, ditto for November, 1849, ..				500	0	0			
							500	0	0

Carried over, 11,376 4 6

				Brought forward,			896	11	9
May 7th, 1849, Dr. E. Roer, Editor of the Oriental Journal, his salary for the month of April last, ..	100	0	0						
Ditto ditto ditto Establishment for ditto,	63	0	0						
Ditto ditto ditto Contingencies for ditto,	9	2	6						
Ditto 15th, ditto, amount sent to Dr. Ballentyne for copying the Yajur Veda,	50	0	0						
					222	2	6		
Ditto 8th, ditto, Librarian for sundry contingencies in the Library Oriental Department, for the month of March, 1849, ...	4	2	0						
Ditto ditto ditto, Sorit-ullah Duftery for binding books, ...	19	7	0						
Ditto 15th, ditto, Establishment for the Custody of Oriental books for the month of April, 1849, ...	72	0	0						
Ditto 18th, ditto, J. Corcoran, Esq. for 20 copies of the 1st Volume of his Account Geographical, Historical, Statistical of the Chinese Empire in the Urdu Language, at 8 per copy, ..	160	0	0						
					255	9	0		
								477	11	6
June 9th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for May, 1849, ..	100	0	0						
Ditto ditto ditto, Establishment for do.	63	0	0						
Ditto ditto ditto, Contingencies for do.	5	3	0						
					168	3	0		
Ditto 15th, ditto, Establishment for the Custody of Oriental Works for May, 1849, ...	72	0	0						
Ditto ditto ditto, Librarian for sundry Contingencies in the Library Oriental Department for April, 1849, ..	0	8	0						
Ditto ditto ditto, Messrs. Lattey, Brothers and Co. for a copy of History of Sooltan Ahoo Syed, ...	33	0	0						
Ditto ditto ditto, Freight on a case of books despatched to Captain Kittoe, Benares, ...	1	8	0						
					107	0	0		
								275	3	0
July 17th, ditto, Establishment for the Custody of Oriental Works for the month of June, ...	72	0	0						
Ditto 18th, ditto, Librarian for Contingencies in the Library Oriental Department for May and June, ..	0	14	6						
Ditto 18th—To Cash paid Muddonmohun Tarkalankara for sundry Sanscrit works purchased from him, ..	27	8	0						
Ditto ditto ditto, Sorit-ullah Duftery for binding books, ...	9	9	0						
					109	15	6		
				Carried over,				1,649	10	3

Brought forward,	11,376	4	6

Carried over,	11,376	4	6

					Brought forward,	1,649	10	3
July 19th, 1849, Dr. E. Roer, Editor of the Oriental Journal, "Bibliotheca Indica" his salary for the month of June, ...	100	0	0					
Ditto ditto ditto, Establishment for Do.	40	0	0					
Ditto ditto ditto, Contingencies for Do.	8	3	6					
				148	3	6		
							258	3	0
Ditto 23d, ditto, Rev. J. Thomas, on account Baptist Mission Press, for printing the "Bibliotheca Indica" from September to December, 1848, No. 9 to 12,..				888	0	0		
							888	0	0
August 1st, ditto, J. W. Laidlay, Esquire, for 100 copies of his version of the "Fa Hian," purchased from him, at 5 Rs. per copy, ...				500	0	0		
							500	0	0
Ditto 9th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica" his salary for July last, ..	100	0	0					
Ditto ditto ditto, Establishment for Do.	55	0	0					
Ditto ditto ditto, Contingencies for Do.	7	1	0					
Ditto 13th ditto, Advanced Dr. E. Roer, on account copying the black Yajur Veda, ...	200	0	0					
				362	1	0		
Ditto 17th ditto, Establishment for the Custody of Oriental works for July,	72	0	0					
Ditto ditto ditto, Librarian for Contingencies in the Library Oriental Department for July last, ..	0	10	0					
				72	10	0		
							434	11	0
Ditto 18th, ditto, Rev. J. Thomas, on account Baptist Mission Press, for printing the "Bibliotheca Indica" from January to April, 1849, No. 13 to 16, ..				892	6	0		
							892	6	0
September 7th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica" his salary for August last, ...	100	0	0					
Ditto ditto ditto, Establishment for Do.	55	0	0					
Ditto ditto ditto, Contingencies for Do.	7	12	0					
				162	12	0		
Ditto 17th—To Cash paid Establishment for the Custody of Oriental works for the month of August,				72	0	0		
							234	12	0
October 23d, ditto, for September, ..	72	0	0					
Ditto ditto ditto, Librarian for contingencies for the months of August and September, ...	1	1	0					
				73	1	0		
Ditto 24th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for September, ..	100	0	0					
Ditto ditto Establishment for ditto, ..	55	0	0					
Ditto ditto Contingencies for ditto, ..	11	12	0					
				166	12	0		
							239	13	0
					Carried over,	5,097	7	3

Brought forward, 11,376 4 6

Carried over, 11,376 4 6

					Brought forward,			5,097	7 3
November 16th, 1849, Rev. J. Thomas, on account Baptist Mission Press, for printing the "Bibliotheca Indica," from May to September, 1849, No. 17 to 21, ...					1,233	12	0		
								1,233	12 0
Ditto 17th, ditto, Establishment for the custody of Oriental Works for the month of October, ..					42	0	0		
Ditto 19th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for October last,	100	0	0						
Ditto ditto Establishment for ditto, ..	85	0	0						
Ditto ditto Contingencies for ditto, ..	4	6	0						
					189	6	0		
								231	6 0
December 18th, ditto, Dr. E. Roer, Editor of the Oriental Journal "Bibliotheca Indica," his salary for Nov. ..	100	0	0						
Ditto ditto Establishment for ditto, ..	70	0	0						
Ditto ditto Contingencies for ditto, ..	5	3	0						
					175	3	0		
Ditto Establishment for the custody of Oriental Works for November, ..	42	0	0						
Ditto 22nd, ditto, Librarian for Contingencies for the Library Oriental Department for November last, ..	1	2	0						
					43	2	0		
								218	5 0
								6,780	14 3
Dec. 31st.—To Balance—									
Company's Papers of the new 5 per cent. Loan deposited with the Government Agent, ..					4,000	0	0		
Cash in the Bank of Bengal, ...					580	8	3		
Ditto in hand, ...					14	14	0		
								4,595	6 3
				Company's Rupees,....				11,376	4 6

Calcutta Asiatic Society, the 31st Dec. 1849.

Brought forward,	11,376	4	6

Company's Rupees,....	11,376	4	6

Errors Excepted.
SEEBCHUNDER NUNDY.

Dr. *Abstract Statement of Account Current of Journal Asiatic Society for the year* 1849. Cr.

RECEIPTS.				DISBURSEMENTS.			
To Amount of Collections from Subscribers during the year, ...	Rs.	1,498	0 0	By Amount paid to the Secretary Asiatic Society on account General Fund, ...	Rs.	1,395	0 0
To Balance of Account Current closed on the 26th December 1848, ...		5	12 4	By Balance in the Bank of Bengal on separate account, ...		108	12 4
Company's Rupees,.....		1,503	12 4	Company's Rupees,.....		1,503	12 4

E. E.

SEEBCHUNDER NUNDY.

Calcutta Asiatic Society, the 31st Dec. 1849.

Abstract Statement of Oriental and other Publications sold from the 1st of December, 1847, to the 30th of December, 1848.

Dr.

Oriental Publications.

Fatawe Alamgiri, Vol. I. 3 copies, Vol. III. 4 copies, Vol. IV. 6 copies, Vol. V. 6 copies, Vol. VI. 7 copies, at Rs. 8 per Vol.	208	0	0		
Ináyá, Vol. II. 1 copy, ...	8	0	0		
Istallahat e Sufia, 1 copy, ...	5	0	0		
Mahábhárata, Vol. I. 10 copies, Vol. II. 10 copies, Vol. III. 9 copies, Vol. IV. 11 copies, at Rs. 10 per Vol.	400	0	0		
Index to ditto, Vol. I. 8 copies, Vol. II. 8 copies, Vol. III. 8 copies, Vol. IV. 8 copies, at Rs. 1-8 per copy, ...	48	0	0		
Súsruta, 3 copies, at Rs. 8 per copy, ...	24	0	0		
Naishada, 3 copies, ...	18	0	0		
Rájatarangini, 2 copies, ...	10	0	0		
Tibetan Grammar, 1 copy, ...	8	0	0		
Tibetan Dictionary, 1 do., ...	10	0	0		
Bibliotheca Indica, 11 Nos., ...	16	8	0		
				755	8	0

Journal.

Journal of the Asiatic Society, 6 Vols. and 61 Nos...	180	8	0		
Hutton's Report on the Valley of Spita, ..	0	8	0		
Roth's Essay on the Vedas, ...	0	6	6		
Asiatic Researches, Vol. XVIII., ...	10	0	0		
				191	6	6

Miscellaneous.

Sanskrita Catalogue, 5 copies, ...	5	0	0		
Persian Catalogue, 6 copies, ...	6	0	0		
Chezy's Sacuntala, 1 copy, ...	10	0	0		
Yajnadatta-badha, 1 copy, ...	3	8	0		
Lassen's Gita Govinda, 1 copy, ...	2	8	0		
Lassen's Institutiones Prakritika, ...	6	0	0		
Hodgson's Aborigines of India, 4 copies, ..	12	0	0		
				45	0	0
Outstanding Bills of 1847.				789	4	0
Total Co.'s Rs...				1781	2	6

Cr.

4th December 1847 to 24th December 1848, By cash paid to F. Greenway, Esq. Offg. Acct. As. Soc., ..	817	10	6		
26th May 1848, do. do. by Lieut. R. MacLagan, ..	123	0	0		
By bill No. 7 of 1847, carried to the debit of H. Torrens, Esq..	134	0	0		
By cash paid by Captain Hannay for a copy of Hodgson's Aborigines of India, ...	3	0	0		
				1077	10	6
By outstanding bills, ...				703	8	0
Total Co.'s Rs...				1781	2	6

E. E.

Asiatic Society, 31st Dec. 1848. Rajendralal Mittra.

Abstract Statement of Oriental Publications, Journal, &c. &c., sold from the 1st of January to the 30th of December, 1849.

Dr.

Fatawe Alamgiri, Vol. I. 6 copies, Vol. II. 4 copies, Vol. III. 4 copies, Vol. IV. 5 copies, Vol. V. 5 copies, Vol. VI. 5 copies, ...	232	0	0		
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Errors and omissions excepted.

RAJENDRALAL MITRA.

Asiatic Society, 31*st December*, 1849.

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English, ...	98	Vols.
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Bills realizable,.....	Rs.	5,571	5	0	
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				5,469	4	0
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By ditto due to Hon'ble Sir Jas. W. Colvile, ...				700	0	0
By ditto ditto to Mr. Laidlay,.....				459	7	4
By ditto ditto to Mr. Torrens, ...				934	0	0
By ditto ditto to Mr. Muir,.....				268	0	0
Company's Rupees,.....				9,211	5	7

E. E.

SEEBCHUNDER NUNDY.

31*st December*, 1849.

N. B.—The amount cost for printing Mr. Blyth's Catalogue of Birds (now in the press) is estimated by Mr. Thomas to be about,..... Co.'s Rs. 688 0 0

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* Exempt from payment of Subscriptions.

6th February, 1850.

The Lord Bishop, in the chair.

The proceedings of the last meeting were read and confirmed.

Letters were read—

From Secretary to the Government of Bengal, forwarding a map of the Behar district.

From Dr. Campbell, Darjiling, returning thanks for the congratulations of the Society on his liberation from imprisonment in Sikim.

From Mr. Joseph Casella, Consul General of H. M. the King of Sardinia, presenting an illustrated work by the Duke of Serradifalco, on the ancient monuments of Sicily.

The thanks of the Society were voted to the Duke for the present.

From Mr. Mansel, Serampore, regarding the proposed Exhibition of Arts, &c. in England, in 1851.

From Dr. Roer, forwarding extract of a letter from Professor Lassen, respecting Mr. Laidlay's proposed Edition of the ancient inscriptions of India.

From Mr. J. W. Laidlay, describing a new mode of preparing facsimiles of coins.

From the same, forwarding a pencil drawing of an ancient sculpture at Malda, forwarded by Mr. Gray of that place.

From Major Durand, presenting a valuable collection of Burmese manuscripts, made by him, while Commissioner at Moulmein.

From Captain Hutton, complaining of the non-acknowledgment of a donation of 130 specimens of mammalia and birds and a collection of shells, made by him through Mr. Blyth, to the Asiatic Society.

Mr. Blyth mentioned that they had been duly presented to the meeting and inserted in the Catalogue, and the receipt noticed in the Journal.

The Hon'ble President having intimated his wish that the proposition respecting Col. Forbes' election, as Honorary President, be reserved for consideration at the next meeting, it was decided to postpone it as desired.

The Curators and Librarian having presented their reports the meeting adjourned.

Confirmed, J. R. Colvin, *Chairman.*

W. B. O'Shaughnessy, *V. P. and Secretary.*

LIBRARY.

The following books have been added to the Library since the last meeting.

Presented.

Memoirs of the Royal Astronomical Society. Vol. XVII. Part I.—PRESENTED BY THE SOCIETY.

An Analytical Digest of all the Reported Cases decided in the Supreme Courts of Judicature in India, in the Courts of the Hon'ble East India Company, and on Appeal from India to Her Majesty in Council. By W. H. Morley. Part VI.—BY THE GOVERNMENT OF INDIA.

The Burmese Reader by Lieut. D. A. Chase. Moulmein 1849, 4 copies (Pamphlets).—BY THE SAME.

Journal of the Indian Archipelago. For November and December 1849. —BY THE EDITOR.

Ditto Ditto. 2 copies.—BY THE GOVERNMENT OF BENGAL.

Journal of the Academy of Natural Sciences of Philadelphia. New series, Vol. I. part 3.—BY THE ACADEMY.

Monthly Notices of the Royal Astronomical Society. Vol. VIII.—BY THE SOCIETY.

Journal of the Madras Literary Society, No. 35.—BY THE SOCIETY.

The Oriental Baptist, No. 38.—BY THE EDITOR.

The Upadeshaka, No. 38.—BY THE EDITOR.

The Oriental Christian Spectator for January, 1850.—BY THE EDITORS.

The Calcutta Christian Observer for February, 1850.—BY THE EDITORS.

Supplement to No. XIV. Picnic Magazine.—BY THE EDITOR.

Comparative Philology (from the Calcutta Review, No. 24).—BY REV. J. LONG.

Tattvabodhiní Patriká, No. 77.—BY THE TATTVABODHINI' SHABHA'.

Essay on Arabic Poetry, in Arabic, by Mauluvi Reza Hossen Khán Báhádur.—BY THE AUTHOR.

Meteorological Register kept at the Surveyor General's Office, Calcutta, for the month of December, 1849.—BY THE DEPUTY SURVEYOR GENERAL.

Map of the District of Behar.—BY THE GOVERNMENT OF BENGAL.

Exchanged.

The Athenæum, Nos. 1149, 50—53-54.

Calcutta Review, No. 24.

Purchased.

The Annals and Magazine of Natural History, No. 23.